

ATTACHMENT 1

OVERVIEW TO THE 2020 REVIEW ASSESSMENTS

- 1 The attachments to the 2020 Review draft report contain the assessments for each revenue and expense category, as well as each disability that affects a number of category assessments (for example, wage costs). Also included is an attachment that sets out how the Commission has used population data in the assessments.
- 2 Table 1 provides a list of attachments.

Table 1 Attachments to the 2020 Review Draft Report

Number	Title
1	Overview to the 2020 Review Assessments
2	Commonwealth payments
	REVENUE
3	Payroll tax
4	Land tax
5	Stamp duty on conveyances
6	Insurance tax
7	Motor taxes
8	Mining revenue
9	Other revenue
	EXPENSES
10	Schools
11	Post-secondary education
12	Health
13	Housing
14	Welfare
15	Services to communities
16	Justice
17	Roads
18	Transport
19	Services to industry
20	Other expenses
	CAPITAL
21	Investment
22	Net borrowing
	DISABILITIES AND OTHER
23	Administrative scale
24	Wages costs
25	Geography
26	Other disabilities
27	Population

3 The data and methods set out in the attachments have been developed in accordance with the principle of horizontal fiscal equalisation (HFE) and the supporting principles — what States do, policy neutrality, practicality and contemporaneity — as adopted by the Commission for the purposes of measuring State relative fiscal capacities.¹

¹ See Chapter 2 of the main report for information about the HFE objective and the supporting principles.

- 4 The 2020 Review assessment guidelines, as set out in Chapter 2 of the main report, have been used to assist in the review of the assessments. In brief, the guidelines say that the Commission will include a disability in a category when:
- a case for the disability is established, namely:
 - a sound conceptual basis for these differences exists
 - there is sufficient empirical evidence that material differences exist between States in the levels of use or unit costs, or both, in providing services or in their capacities to raise revenues
 - a reliable method has been devised that is:
 - conceptually rigorous (for example, it measures what is intended to be measured, is based on internal standards and is policy neutral)
 - implementable (the disability can be measured satisfactorily)
 - where used, consistent with external review outcomes
 - data are available that are:
 - fit for purpose — they capture the influence the Commission is trying to measure and provide a valid measure of State circumstances
 - of suitable quality — the collection process and sampling techniques are appropriate, the data are consistent across the States and over time and are not subject to large revisions
 - the assessment is material.
- 5 The general approach to revenue and expense assessments are described below.

CALCULATING ASSESSED REVENUE

- 6 Assessed revenues are derived by multiplying a revenue base (referred to as a capacity measure) by the average tax rate. This is equivalent to apportioning total revenue by each State's share of the revenue base.

Revenue base (capacity measure)

- 7 Conceptually, the capacity measure is the revenue disability faced by States. To establish the revenue base, the Commission examines States' tax legislation to identify the transactions being taxed, the concessions or exemptions being offered and how tax liability is assessed.
- 8 Revenue bases are generally constructed using data on the number or value of taxable transactions. The extent to which data on the number or value of taxable transactions might be policy influenced is also considered.
- 9 Data can be obtained from two sources.

- State tax collection agencies. Stamp duty on conveyances is an example of a revenue base measured using State provided data.
 - Independent sources. Revenue bases can be measured using data from independent sources (such as the Australian Bureau of Statistics). If the data are a reliable measure of each State's revenue capacity, the Commission's preference is to measure revenue bases using third party data, because third party data tend to be less affected by State policy differences. Payroll tax is an example of a revenue base measured using third party data.
- 10 **Adjustments for differences from the average policy.** Revenue bases are measured with reference to what States, on average, tax. What is taxed in one State might not be taxed in another. Thus, adjustments may be required to remove or add parts of the base where a State's policy differs from the average. This is more common for data supplied by States. The Commission's preference is to measure revenue bases using third party data, because third party data tend to be less affected by State policy differences. For example, in the Stamp duty on conveyances category, an adjustment is made to remove transactions that are caught by the wider unit trust provisions in three States.
- 11 **Adjustments for differences in disability influences.** A revenue base should capture differences in capacity arising from factors outside the control of a State. An adjustment may be required to remove or add a factor. For example, if States impose different rates of tax on different parts of the tax base, assessing revenue capacity using the total value of transactions will not capture all revenue disabilities. An adjustment may be required to reflect how differences in the distribution of taxable transactions across value ranges can affect the revenue States raise. Such progressivity adjustments are assessed in the Land revenue and Stamp duty on conveyances categories.
- 12 If reliable data are available to adjust a revenue base, the Commission uses the data to estimate the size and direction of the adjustment for each State. An adjustment is only included if it is material. If reliable data are not available, but the Commission is confident about the direction and relative size of the adjustment, it may determine an adjustment using judgment.

Average tax rate

- 13 The average tax rate is calculated by dividing total revenue by the total revenue base. This calculation means it reflects any concessions or rebates provided by States.

CALCULATING ASSESSED EXPENDITURE

- 14 The expenditure assessments start from a presumption that, if all things were equal, each State could provide the average level of service by spending the average amount per capita. However, State circumstances differ and this leads to differences in:
- the use of services, which can have an effect on the cost of providing services through:
 - greater demand for services (some population groups may use services more often than others)
 - greater cost per occasion of service (some population groups may cost more per occasion of service than others)
 - the cost of inputs used in the provision of services, such as wages.
- 15 Some examples are provided below.
- Hospital services are used more intensively (through either greater demand or greater cost per occasion of service) by some age groups and by Indigenous people. States are assessed to have a cost disadvantage, or disability, if the groups that make the most use of a service are a larger proportion of their population than they are of the national population. Conversely, they have a cost advantage if the size of the group is smaller than the national average.
 - Cost of inputs covers interstate differences in wage related costs and inter-regional differences in wage and non-wage related costs. In addition, some States face diseconomies of small scale, which result in higher per capita costs.
- 16 However, higher costs arising from a State's decision to provide a higher level of service, or lower efficiency levels do not constitute a disability.
- 17 Table 2 summarises the expenditure disabilities the Commission is proposing to assess in the 2020 Review.

Table 2 Proposed disabilities to be measured in each expenditure category

Category	Disaggregated use attributes				Other disabilities assessed (a)								
	Indigenous status	Socio-economic status	Region (c)	Age	Population growth	Non-State sector	Wage costs	Regional costs	Service delivery scale	National capital	Cross-border	Natural disaster relief	Other
Schools education	✓	✓	✓	✓		✓	✓	✓	✓		✓		
Post-secondary education	✓	✓	✓	✓			✓	✓			✓		
Health	✓	✓	✓	✓		✓	✓	✓	✓		✓		
Welfare	✓	✓	✓	✓			✓	✓					
Housing	✓	✓	✓				✓	✓					
Services to communities	✓		✓				✓	✓	✓				
Justice	✓	✓	✓	✓			✓	✓	✓	✓			
Services to industry							✓	✓					✓ (d)
Roads			✓				✓	✓			✓		✓ (e)
Transport							✓	✓					✓ (f)
Other expenses							✓	✓		✓		✓	
Investment (b)					✓		✓	✓					
Net borrowing					✓								

Note: Administrative scale costs and native title and land rights disabilities for all categories are assessed in the Other expenses category.

- (a) Some disabilities only apply to a proportion of the category. For more information, please refer to the draft report attachments for each expense category.
- (b) The Investment assessment uses relevant category specific use disabilities to calculate assessed stock. A capital cost disability is also applied. The disabilities used are described in the expense attachments and the Investment attachment.
- (c) The effect of the use of services and unit cost of providing services in different regions of States.
- (d) Sector size and population.
- (e) Road length and use and the need for bridges and tunnels.
- (f) Urban centre characteristics (population size, density, public transport use, distance to work, topography and the presence of ferry services).

CALCULATING THE EQUALISATION REQUIREMENTS

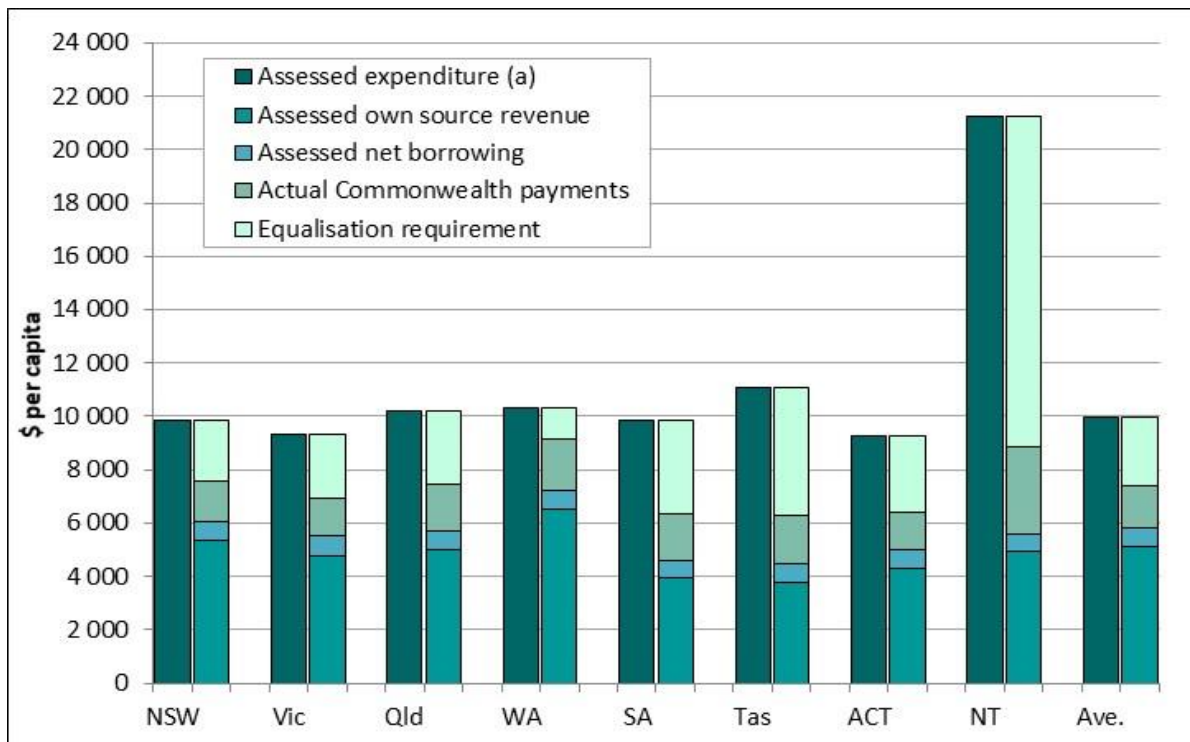
18 A State’s equalisation requirement is the difference between the sum of its assessed expenses and assessed investment, and the sum of its assessed own source revenue, assessed net borrowing and Commonwealth payments for specific purposes (PSPs), where:

- a State’s assessed expenses are the expenses it would incur if it were to follow average expense policies, allowing for the disabilities it faces in providing services, and assuming it provides services at the average level of efficiency

- a State’s assessed investment is the expenditure on infrastructure it would incur if it were to follow average policies, allowing for disabilities it faces in providing infrastructure, and assuming it requires the average level of infrastructure to deliver the average level of services
- a State’s assessed revenue is the revenue it would raise if it were to apply the average policies to its revenue base, and raise revenue at the average level of efficiency
- a State’s assessed net borrowing is the amount a State would require to achieve the average net financial worth at the end of each year
- a State’s Commonwealth payments is the amount of PSPs it receives from the Commonwealth.

19 The assessed equalisation requirement is the Commission’s estimate of the funding each State requires to have the financial capacity to provide the average (or same) standard of services. This level of funding also ensures that each State has the financial capacity to finish the year with the average (or same) net financial worth (NFW) per capita. In other words, NFW is equalised.

Figure 1 Equalisation requirement, 2017-18



(a) Includes expenses and investment.

Source: Commission calculation.

ATTACHMENT 2

COMMONWEALTH PAYMENTS

Summary of proposed changes to the 2015 Review methodology

- The assessment method is unchanged from that used in the 2015 Review. However, the application of these methods has changed because of changes to other category assessments.
- The treatment of payments for the Infrastructure Investment program — Bridges Renewal program has changed from having no impact to having an impact on State fiscal capacities because disabilities are assessed for bridges and tunnels in the 2020 Review.
- Payments for Royalties and Compensation for Reduced Royalties are included as Commonwealth payments revenue and not as mining revenue. The assessment of these payments (actual per capita) has not changed.
- The Commonwealth payments category has two components. In addition to the 'impact' payments under the 2015 Review methodology, it has another component comprising other Commonwealth transfers.

- 1 This attachment contains the Commission's draft proposals for the treatment of Commonwealth payments (other than the GST) following consultation with the Commonwealth and States.

OVERVIEW

- 2 Commonwealth payments to the States were \$120 billion in 2017-18, representing 43.9% of total State revenue (Table 1). They comprise:
 - general revenue assistance — the main form is the GST entitlement
 - payments for specific purposes (PSPs)
 - national specific purpose payments (NSPPs) for Skills and Workforce Development, Disability and Affordable Housing
 - National Health Reform funding
 - Quality Schools funding

- national partnership payments (NPPs).

Table 1 Commonwealth payments to States, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
General revenue assistance (\$b)	17.7	15.2	15.0	3.0	6.3	2.4	1.3	3.2	64.2
Payments for specific purposes (\$b)	17.2	12.5	12.0	6.7	4.2	1.3	0.9	1.1	56.1
Total payments (\$b)	35.0	27.7	27.1	9.7	10.5	3.7	2.2	4.3	120.3
Total payments (\$pc)	4 413	4 345	5 456	3 760	6 094	7 096	5 350	17 548	4 857
Payment as proportion of State revenue (%)	41.0	43.0	46.6	33.1	54.4	61.1	41.2	72.8	43.9

Note: Figures in this table do not include Commonwealth own-purpose expenses.

Source: Commonwealth payments are sourced from Commonwealth of Australia's *Final Budget Outcome 2017-18*, Table 25. Total State revenues are sourced from State financial reports.

- 3 Table 2 shows revenue from Commonwealth payments as a share of State total revenue from 2014-15 to 2017-18.

Table 2 Commonwealth payments, 2014-15 to 2017-18

	2014-15	2015-16	2016-17	2017-18
Revenue from Commonwealth payments (\$m)	103 423	106 195	115 682	120 304
Proportion of total revenue (%)	43.7	43.4	44.4	43.9

Source: Commonwealth payments are sourced from Commonwealth of Australia's *Final Budget Outcome* documents. Total State revenues are sourced from GFS and State financial reports.

- 4 State fiscal capacities are affected by Commonwealth payments because they fund the provision of State services or the acquisition of assets. Like other State revenue, these payments are taken into account when measuring State fiscal capacities.
- 5 When the Commission decides a payment affects a State's fiscal capacity, this does not mean it is changing the payment in any way, or overriding its purpose. The State still receives the payment and must comply with its conditions. However, its equalisation requirement will adjust to reflect any above or below average per capita receipt of the payment to ensure it has the financial capacity to deliver average services and the associated infrastructure.¹
- 6 Commonwealth own-purpose expenses (COPEs)² are another form of intergovernmental financial payment. The payments in Table 1 do not include COPEs. The Commission does not consider the majority of these payments but those paid to

¹ Chapter 2 of the main report explains the Commission's approach to measuring State relative fiscal capacities.

² A Commonwealth own-purpose expense is an expense made by the Australian Government in the conduct of its own general government sector activities, and includes expenses for the purchase of goods and services and associated transfer payments.

the States for the purchase of services from the States are included in the State budget.

ASSESSMENT APPROACH

- 7 The Commission’s Commonwealth payments category includes:
- payments affecting State fiscal capacities, or ‘impact’ payments
 - other Commonwealth transfers, mainly COPEs, that do not affect State fiscal capacities, but remain in the adjusted budget because it is not possible to remove the related expenditure.^{3, 4}
- 8 GST payments and ‘no impact’ payments are not included in the category.⁵ The latter payments and their related expenditure are removed from the adjusted budget, ensuring they have no effect on the Commission’s measures of State fiscal capacities.
- 9 Table 3 shows the category’s assessment structure, the size of each component and the assessment methods. Payments affecting State fiscal capacities are assessed on an actual per capita (APC) basis and other Commonwealth transfers are assessed on an equal per capita (EPC) basis, meaning these payments do not influence the Commission’s measures of State relative fiscal capacity.

Table 3 Category structure, Commonwealth payments, 2017-18

Component	Component revenue	Assessment method
	\$m	
Payments affecting State fiscal capacities (a)	37 366	Actual per capita
Other Commonwealth transfers	2 820	Equal per capita

Note: The Commonwealth payments category does not include GST payments. Payments that the Commission decides should not affect State fiscal capacities are removed from the revenue and expenditure side of the adjusted budget.

(a) A small number of COPEs are included in this amount. The rest are included in other Commonwealth transfers.

Source: Commission calculation using State budget data and Commonwealth of Australia’s *Final Budget Outcome 2017-18*.

- 10 Under the new GST distribution arrangements to apply from 2021-22, pool top-up payments will be in the other Commonwealth transfers component. Since these payments are untied, it is not possible to identify and remove the corresponding expenditure from the adjusted budget.

³ Removing these payments from State revenue in the adjusted budget without making corresponding adjustments to expenditure would result in an imbalance.

⁴ The adjusted budget is a representation of State budgets used by the Commission to calculate the average per capita revenue and expense.

⁵ The next section defines impact and no impact payments.

- 11 The following section discusses the Commission’s treatment of Commonwealth payments in detail.

Data sources

- 12 Government Finance Statistics (GFS) sourced from the ABS provide the total amount of payments from the Commonwealth to the States, which includes revenue from GST, other general revenue assistance, NSPPs, national agreements, NPPs and COPEs. Additional details for payments other than COPEs are sourced from the Commonwealth’s *Final Budget Outcome* (FBO).

TREATMENT OF COMMONWEALTH PAYMENTS

- 13 Commonwealth payments are treated in the following ways:
 - Payments affecting State fiscal capacities or ‘impact’ payments
 - the revenue is assessed APC in the Commonwealth payments category
 - the related expenditure is assessed using the same disabilities as other expenditure in the related category.
 - Payments not affecting State fiscal capacities or ‘no impact’ payments
 - the revenue is removed from the adjusted budget
 - the spending of the payment is removed from the related expenditure category.⁶
- 14 The Commission uses a set of guidelines to assist it when making decisions on the treatment of each payment, that is, whether it should receive an ‘impact’ or ‘no impact’ treatment. The terms of reference (ToR) also give directions on the treatment of specified payments.
- 15 Table 4 provides information on the amounts of payments and their methods of treatment in 2017-18. In 2017-18, quarantined payments were 4.4% of total payments for specific purposes. No impact payments were a further 30.4% of payments.

⁶ In some cases, the Commission might choose to assess both revenue and expenses using the same method (such as EPC or APC) to implement a no impact treatment. The Commission is not proposing to use these approaches in the 2020 Review. Previously, this was the approach the Commission used for Quality Schools funding for non-government schools.

Table 4 Commonwealth payments — Methods of treatment, 2017-18

Treatment	2017-18 \$m	2017-18 %
Payments listed in FBO		
Method required by terms of reference		
No impact	2 510	4.4
Method decided by the Commission		
Impact	37 366	65.1
No impact	17 481	30.4
State revenue (a)	69	0.1
Sub-total	54 916	95.6
Total payments for specific purposes	57 426	100.0
Other Commonwealth transfers		
Revenue assessed EPC, expenditure not removed	2 820	

Note: Figures in this Table includes COPEs. Payments made direct to local governments are included in Other Commonwealth transfers.

(a) This is the payment for Interstate road transport that the Commission assesses as motor taxes.

Source: *Commonwealth of Australia's Final Budget Outcome 2017-18*, State budget data and Commission calculation.

- 16 Table 4 includes the Commission's intentions to make the following changes in the treatment of two payments in the 2020 Review.
- The treatment of the payment for the Infrastructure Investment program — Bridge Renewal program has changed from having no impact to having an impact on State fiscal capacities because disabilities are assessed for bridges and tunnels in the 2020 Review.
 - Payments for Royalties and Compensation for Reduced Royalties are included in the Commonwealth payments category and not as mining revenue. The assessment of these payments (actual per capita) has not changed.
- 17 Previously, when discussing Commonwealth payments and their treatments, the Commission has referred to payments that affect the relativities and payments that do not affect the relativities. Given the changes to the GST distribution arrangements from 2021-22, the Commission intends to change its terminology and refer to payments that affect State fiscal capacities and payments that do not.

Terms of reference requirements

- 18 Clause 8 of the ToR provide guidance to the Commission on the treatment of Commonwealth payments. They ask the Commission:
- to ensure that some specified payments, including all reward payments, have no effect on the State fiscal capacities
 - to treat national specific purpose payments, National Health Reform funding, Quality Schools funding (for government schools), national partnership project

payments and general revenue assistance other than the GST, so that they would affect State fiscal capacities, but treat national partnership facilitation payments so that they would not.

- 19 However, the ToR (Clause 8d) also give the Commission discretion to vary the treatment of the second group of payments where it is appropriate, reflecting the nature of the payment and the role of State governments in providing services. The Commission interprets this clause as meaning that in exercising its discretion, it will be guided only by the principle of Horizontal Fiscal Equalisation (HFE).
- 20 The Commission is aware there are other policy objectives behind the distribution of Commonwealth payments. However, it does not consider it has been asked to choose among objectives in advising on the GST distribution. It has no discretion other than that which improves the HFE outcome. If that discretion is not to be exercised for a specific payment, the Treasurer will give direction in the ToR.
- 21 The ToR⁷ require the following payments should not directly affect State fiscal capacities. The Commission has treated them accordingly.⁸
- additional general revenue assistance (\$259.6 million) to the Northern Territory to offset the reduction in its GST share
 - additional general revenue assistance relating to GST transitional support and top-up payments under the Commonwealth's HFE reform package:
 - to the Northern Territory to effectively lift its GST relativity to 4.66
 - to any other State or Territory to effectively lift their GST relativities to 0.7
 - to any State or Territory under subsection 5(3) of the *Federal Financial Relations Act 2009* (the cumulative 'no worse off' guarantee).
 - assisting preparation towards the launch of the National Disability Insurance Scheme
 - Caring for our Country — animal and plant pest disease eradication
 - Centenary of Canberra 2013 — A gift to the national capital
 - Expansion of Clare Holland House in the ACT (project agreement)
 - Health Care Grants for the Torres Strait
 - Health Innovation Fund — Stage 1 (project agreement)
 - Improving Health Services in Tasmania
 - Infrastructure Growth Package — Asset Recycling Initiative
 - Northern Territory remote Aboriginal investment
 - Proton Beam Facility in South Australia (project agreement)

⁷ This refers to current and previous terms of reference.

⁸ The Commission refers to these payments as 'quarantined payments'.

- Queensland fruit fly response in Tasmania (project agreement)
- Re-allocated Perth Freight Link Infrastructure funding (\$1.2 billion) to Western Australia
- Regional Rail Revival program (\$1.42 billion) to Victoria
- Remote Indigenous Housing commencing in 2018-19 (up to \$110 million per annum for 5 years to the Northern Territory)
- Roads to Recovery
- Royal Darwin Hospital — equipped, prepared and ready
- Royal Victorian Eye and Ear Hospital redevelopment
- Sale of Snowy Hydro from New South Wales and Victoria to the Commonwealth
- Sinking Fund on State debt
- South Australian River Murray Sustainability program
- State drawdowns from DisabilityCare Australia Fund during the transition phase for the National Disability Insurance Scheme
- Transfer of the Mersey Community Hospital to Tasmania (\$730.4 million)
- Trial of My Way sites
- Victorian cytology service
- Western Australian Hospital Infrastructure Package (project agreement)
- Western Australia infrastructure projects
- 50% of the following payments:
 - \$1.5 billion for WestConnex
 - \$3.0 billion for the East-West link
 - \$2.9 billion for the Western Sydney infrastructure plan
 - \$0.6 billion for the Toowoomba second range crossing
 - \$0.9 billion for the Perth freight link/Roe highway
 - \$0.4 billion for the North-South road corridor
 - \$0.1 billion for the Northern Territory roads package.

22 The ToR also require the National Health Reform funding and corresponding expenditure relating to the provision of cross-border services to the residents of other States be allocated to States on the basis of residence. The Commission adjusts the National Health Reform funding accordingly.

Treatment to achieve Horizontal Fiscal Equalisation

23 The 2015 Review assessments provided the starting point for the 2020 methodology review. Issues on the treatment of Commonwealth payments are discussed in Staff discussion paper *CGC2017-02-S The principle of HFE and its implementation*, May

2017 and later in Commission position paper *CGC 2017-21 The principle of HFE and its implement*, September 2017. The staff proposals, the Commission's position and State submissions are available on the [Commission website](https://cgc.gov.au) (<https://cgc.gov.au>).

Treatment guideline

- 24 In this review, the Commission will adopt the following guideline, as in the 2015 Review, to decide the treatment of all payments on a case by case basis:

‘Payments which support State services, and for which expenditure needs are assessed, will have an impact on State fiscal capacities.’⁹
- 25 Under this approach, all Commonwealth payments that completely or partially offset the fiscal consequences of expense disabilities will be recognised in assessing State fiscal capacities. Similarly, Commonwealth payments used to address differences the Commission has not assessed will not affect State fiscal capacities.
- 26 In considering whether needs (disabilities) are assessed for the activity for which the payment has been made, the Commission will have regard to the rationale (or driver) applied by the Commonwealth in determining the distribution of the payment.
- 27 Where the driver applied by the Commonwealth broadly aligns with the Commission's expense assessments, the Commission would consider ‘needs are assessed’ for the payment. This includes the Commission's use of population shares as the driver of an assessment where it concludes there are no differences in the per capita service delivery costs (a deliberate EPC assessment) in delivering the service. Where the Commission considers the drivers in the assessments do not sufficiently reflect the Commonwealth distribution of the payment, the payment will not affect State fiscal capacities.
- 28 Other examples of payments excluded because needs are not assessed include payments from the Commonwealth reimbursing the State for projects that will achieve a Commonwealth objective or priority, and payments through the States that need to be passed on to third parties (for example, funding for non-government schools).
- 29 Adopting the guideline and applying it on a case by case basis to Commonwealth payments will result in some payments having an effect on State fiscal capacities and others not. The decision is made purely on the basis of whether the payment is available to support State services and whether needs have been assessed.

⁹ There is a terminology change: in the 2015 Review, we said ‘*impact on the relativities*’.

Application of the treatment guideline

- 30 To simplify the application of the treatment guideline, the Commission has considered the following:
- What payments should be considered?
 - How should payments through the States be treated?
 - Should a materiality threshold for Commonwealth payments be developed?
 - When to backcast Commonwealth payments?
 - How to treat payments for infrastructure?

What payments should be considered?

- 31 Other than those payments listed in the Commonwealth's FBO, the Commonwealth also provides direct and indirect financial support to States through COPEs, the direct provision of services that relieve States from providing those services, concessional loans and debt forgiveness. To the extent possible, the Commission considers these Commonwealth supports and their implications on State fiscal capacities. For example, the Commission assesses a non-State sector disability in the Health category to recognise the availability of State-like services from non-State health providers (including the Commonwealth Government) in each State influences the level of State spending. The provision of concessional loans to States are treated in the same way as other borrowing by State Governments, and debt forgiveness would be treated as a capital grant to the relevant State.
- 32 **COPEs.** COPEs are paid to State governments as well as non-government organisations. A COPE is an expense made by the Commonwealth in the conduct of its own general government sector activities, and includes expenses for the purchase of goods and services. To the extent that COPEs affect a State's fiscal capacity, they should be included in the Commonwealth payments assessment. However, collecting information on them is difficult. Attempts by the Commission to collect comprehensive information about COPEs have not been successful. Most States could not provide detailed information on revenue from COPEs and GFS does not have a function of government classification code for revenue from Commonwealth grants.¹⁰
- 33 The Commission does consider some COPEs for Indigenous programs managed by the Department of Health and by the Department of the Prime Minister and Cabinet (PM&C). The COPEs paid to the States where needs are assessed affect State fiscal capacities. The COPEs paid to non-government organisations managed by Department of Health are assessed in the community health assessment because the Commission considers they affect State spending.

¹⁰ This information is necessary if a COPE is to receive a no impact treatment.

- 34 Information on other COPEs is not readily available. Currently this revenue is assessed EPC in the other Commonwealth transfers component and the expense is assessed in the function that the COPE is paid for.

How should payments through the States be treated?

- 35 Payments made through States to third parties, such as to non-government schools, other non-government organisations, State trading enterprises or local governments, can have indirect effects on State fiscal capacities. For example, a payment to a local government in one State might reduce the amount the State needs to spend to achieve average service levels.
- 36 Information and amounts on the ‘through’ payments published in the Commonwealth’s FBO are sourced from the Commonwealth Treasury.
- 37 For some payments, such as payments to non-government schools under the Quality Schools funding agreement and payments to local governments under the local government financial assistance grants arrangement, the States are required to pass on the full payment to the ‘third parties’. In these circumstances, the States act as intermediaries and the payments do not affect their fiscal capacities. These payments and the related transfer are excluded from the adjusted budget and they have no effect on State fiscal capacities.
- 38 For other payments through the States, if the States have discretion on whether to pass on the full amount or part of it to third parties, the Commission will apply the Commonwealth payments guideline to decide on their treatment. They will affect State fiscal capacities if needs are assessed.

Should a materiality threshold for Commonwealth payments be developed?

- 39 States were asked whether for simplicity, a materiality threshold should be applied when deciding how a payment should be treated. The default treatment of Commonwealth payments as set out in the ToR would apply to payments below the threshold.
- 40 Tasmania and the Northern Territory did not support applying a materiality threshold to Commonwealth payments. Other States did not comment.
- 41 The Commission intends not to apply a materiality threshold to Commonwealth payments. The decision on whether a payment should affect State fiscal capacities is made purely on the basis of whether the payment is available to support State services and whether needs have been assessed. The size of the payment would not influence the Commission’s decision.

When to backcast Commonwealth payments?

- 42 If there are major changes in federal financial relations between the years used in the Commission's assessments and the year to which the Commission's recommendations will be applied, the Commission 'backcasts' the new arrangements, unless the ToR direct it not to do so or it cannot be done reliably. This makes the Commission's assessments more contemporary by ensuring that they better reflect the range, level and interstate allocation of Commonwealth payments that will exist in the application year.
- 43 Most States support backcasting major changes in federal financial relations, only if the information and data used for backcasting are reliable. The ACT suggested backcasting could be applied to all Commonwealth payments since it will improve contemporaneity. It assumes the Commonwealth's estimates of the distribution of its payments for the coming years are accurate.
- 44 The Commission does not support backcasting all Commonwealth payments. The estimated amounts for forward years published in the Commonwealth's budget papers are not reliable and sometimes not available when a new agreement is under negotiation.
- 45 The Commission intends to continue to backcast payments made as a result of major changes in federal financial relations, only if the information and data available for backcasting are reliable.

Treatment of infrastructure payments

- 46 There are two issues on the treatment of infrastructure payments:
- application of 50% no impact treatment to national roads and rail networks
 - equalising capital grants over a longer period.
- 47 ***Application of 50% no impact treatment to road and rail national networks.*** Some States raised concerns about the current application of a 50% no impact treatment to payments for national road and rail networks. They asked the Commission to review the treatment of these infrastructure payments.
- 48 The Commission intends to continue treating 50% of Commonwealth payments for investment in national road and rail networks as having no impact on State fiscal capacities. The Commission remains of the view that these payments are influenced by Commonwealth considerations that are not captured in the State-based disability measures used by the Commission.
- 49 Victoria, Tasmania, the ACT and the Northern Territory did not support the retention of the current treatment. They argued that:
- the Commonwealth and States can influence the projects selected for funding, including for political considerations

- the designation of on-network roads and rail tracks is arbitrary or non-transparent
 - the proportion (50%) is arbitrary
 - it is not always clear what the Commonwealth objectives may be and how they differ from those of the States
 - State fiscal capacities are not equalised.
- 50 In addition, Western Australia and South Australia supported the development of clear guidelines. As a possible compromise, Victoria said that if a no impact proportion is retained, it should be applied to all road and rail construction projects.
- 51 Queensland and South Australia supported the retention of the current treatment. New South Wales did not express a view.
- 52 The Commission acknowledges the arguments for the discontinuation of the 50% no impact treatment but remains concerned that transport infrastructure projects can have national objectives related to the efficient movement of people and goods that the Commission’s assessments do not capture. For example, the Commonwealth selects many projects relating to the national network through its Infrastructure Priority List, which identifies major proposals that have substantial strategic merit and are of national significance. The *Australian Infrastructure Audit report (2015)* identified seven strategic priorities for deciding whether projects should be included on the priority list. These strategic priorities include increasing Australia’s productivity and improving social equity and quality of life.
- 53 Given the concerns about how well the State-based disability measures capture all the influences that affect Commonwealth funding decisions, the Commission considers it appropriate that part of the Commonwealth payments for national network road and rail projects are treated as no impact.
- 54 Some States suggested the development of clearer guidelines. The Commission considers that the Department of Infrastructure, Regional Development and Cities national network designations remain the best available source for identifying significant roads and rail tracks. Identifying and quantifying spill-over effects, as suggested by South Australia, would be difficult to undertake reliably. It could also be time-consuming and involve considerable judgment. In the absence of a reliable method for quantifying the national benefits, the Commission considers the current 50% no impact treatment remains appropriate.
- 55 ***Equalising capital grants over a longer period.*** Currently, the Commission includes the full amount of capital grants paid in a year. If the payment is treated as no impact, the full amount will be deducted from the Commonwealth payments and the investment assessments in the year of payment. If it receives an impact treatment, the full amount will be assessed APC in the Commonwealth payments

assessment in the year of payment and the capital expenditure will be assessed in the year it is spent.

- 56 Tasmania was concerned that this treatment of Commonwealth capital payments can create volatility in the GST distribution when relatively large one-off Commonwealth payments are made. It said that, while over the long term, lumpy capital payments tend to even out, in the short term they can create significant budget flexibility constraints, particularly for a small State. Tasmania noted the 2012 GST Distribution Review suggested equalising capital payments over a longer period of time to reflect over-time nature of investment.
- 57 The Commission agrees in principle that capital payments should be equalised over the years the payment is spent. However, collecting information on the expenditure of each infrastructure payment is problematic and would impose a significant burden on States. For this reason, the Commission has decided to equalise capital payments in the year they are paid. The three-year averaging process goes some way to spreading the effect of these payments over time.

REDISTRIBUTION FROM AN EPC ASSESSMENT

- 58 Table 5 shows the extent to which the assessment for Commonwealth payments differs from an EPC assessment. States with a positive redistribution are assessed to have below average capacity to raise Commonwealth payments and States with a negative redistribution are assessed to have above average revenue raising capacity. In per capita terms, the Northern Territory experiences the largest redistributions.

Table 5 **Redistribution from an EPC assessment, Commonwealth payments, 2017-18**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	807	1 165	-640	-761	-186	-84	104	-405	2 076
\$ per capita	102	182	-129	-294	-108	-160	251	-1 642	84

Note: The redistribution is the difference from an EPC assessment of Commonwealth payments.

Source: Commission calculation.

UPDATING THE ASSESSMENT

- 59 As required by the ToR, the Commission will incorporate the latest available data in the assessment during the annual updates. This will allow the assessment to reflect changes in State circumstances.
- 60 The following data will be updated annually:

- Government Finance Statistics State revenue from Commonwealth payments collected from the ABS
- each Commonwealth payment published in the Commonwealth of Australia's Final Budget Outcome
- through and reward payments, and details of local government financial assistance grants collected from the Commonwealth Treasury
- details of payments for road and rail investment projects collected from the Department of Infrastructure, Regional Development and Cities
- Commonwealth own-purpose expenses collected from the Department of Health, and Department of Prime Minister and Cabinet.

61 Before the release of the final report by 28 February 2020, there will be opportunities for consultation on this assessment. For further information about this category, please contact Priscilla Kan on priscilla.kan@cgc.gov.au.

ATTACHMENT 3

PAYROLL TAX

Summary of proposed changes to the 2015 Review methodology

- The assessment method is unchanged from that used in the 2015 Review.

- 1 This attachment contains the Commission’s draft proposals for the Payroll tax category following consultation with the Commonwealth and States.

REVENUE OVERVIEW

- 2 States raised \$24.2 billion in payroll tax revenues in 2017-18, representing 19.2% of total State own-source revenue (Table 1). The category includes revenue from payroll tax imposed on the wages and related benefits (remuneration) paid by firms operating in each State. Employers are liable for payroll tax if their total Australian remuneration exceeds a general deduction threshold.

Table 1 Payroll tax by State, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Total revenue (\$m)	8 782	5 955	3 880	3 246	1 188	352	481	360	24 244
Total revenue (\$pc)	1 109	933	782	1 256	687	670	1 156	1 458	979
Proportion of operating revenue (%)	20.7	21.2	15.2	18.4	17.9	19.1	18.6	24.9	19.2

Source: Commission calculation using State budget data.

- 3 The category excludes revenue from payroll tax paid by State general government sector agencies in some States.
- 4 Table 2 shows the share of State revenue from payroll tax from 2014-15 to 2017-18.

Table 2 Payroll tax, 2014-15 to 2017-18

	2014-15	2015-16	2016-17	2017-18
Total revenue (\$m)	21 924	22 560	23 054	24 244
Proportion of total operating revenue (%)	20.0	19.8	19.3	19.2

Source: Commission calculation using ABS Government Finance Statistics (GFS) and State budget data.

State role

- 5 States impose payroll tax on taxable remuneration paid by firms in each State. The scope of the tax and the range of exemptions and concessions have largely been harmonised, but States retain control over their tax rates and thresholds.

Commonwealth role

- 6 The Commonwealth imposed payroll tax between 1941 and 1971. In 1971, it ceded control of payroll tax to the States. The Commonwealth has no current role in this area.

CATEGORY STRUCTURE

- 7 Table 3 shows the category's assessment structure, the size of its sole component and the capacity measure (revenue disability) that applies.

Table 3 Category structure, Payroll tax, 2017-18

Component	Component revenue	Capacity measure (revenue disability)	Influence measured by disability
	\$m		
Payroll tax	24 244	Value of taxable remuneration	Recognises the additional revenue capacity of States with greater private sector and non-general government public sector remuneration above an average threshold.

Source: Commission calculation using State budget data.

Category and component revenue

- 8 The data sources for calculating category revenue are ABS Government Financial Statistics (GFS) and State budget data.¹

¹ Unless otherwise stated, category and component revenues for the first two assessment years are sourced from ABS GFS. States provide data for the most recent assessment year because GFS data are not available in time for the annual update.

ASSESSMENT APPROACH

Capacity measure (revenue disability)

- 9 States impose payroll tax on private sector and non-general government public sector employers, whose total Australian remuneration exceeds a general deduction threshold. The greater the value of taxable remuneration in a State, the greater its capacity to raise revenue.

Data and method

- 10 The Commission measures revenue capacity using ABS National Accounts data on compensation of employees (CoE). CoE is a broad measure of the remuneration paid in each State, covering wages, salaries, other cash benefits on behalf of employees (such as superannuation) and non-cash benefits.
- 11 CoE data cannot be dissected by size of employers' payrolls and are, therefore, supplemented with ABS data on wages and salaries to recognise the average policy to exempt payrolls below a threshold. ABS wages and salaries data are also used to remove remuneration paid by the general government sector in each State.
- 12 ***Private sector remuneration.*** Taxable remuneration in the private sector is calculated by adjusting private sector CoE to recognise the policy of all States to exempt remuneration below a general deduction threshold. To ensure the assessment is policy neutral, an average threshold is calculated by weighting each State's threshold by its share of total remuneration paid.²
- 13 ABS data on aggregate private sector wages and salaries in each State above the average threshold are used to calculate the taxable proportion of total private sector remuneration in each State.³ The taxable proportion is applied to private sector CoE to calculate the private sector part of the revenue base for each State.
- 14 ***Public sector remuneration.*** Taxable public sector remuneration in each State is calculated using ABS wages and salaries data⁴ to make adjustments to public sector CoE to exclude:
- remuneration of general government employees
 - remuneration below an average threshold.⁵

² The average threshold is adjusted before being provided to the ABS, to reflect that the wages and salaries data are narrower in scope than the CoE data.

³ Private sector wages and salaries data are sourced from the ABS Quarterly Business Indicators Survey.

⁴ Public sector wages and salaries data are sourced from the ABS Survey of Employment and Earnings.

⁵ The threshold differed from the private sector threshold, since wages and salaries represented a different proportion of CoE in the two sectors nationally, the result is also rounded to the nearest \$10 000.

- 15 The remuneration of general government sector employees at all levels of government is excluded from the revenue base, to reflect that:
- States are unable to tax Commonwealth general government sector agencies
 - States raise only minor revenue from the general government sector at local government level⁶
 - payroll tax revenue collected by some States from their general government agencies is excluded since it represents an internal budget transfer, so the corresponding remuneration is removed from the revenue base.
- 16 The taxable public sector, therefore, includes public sector financial and non-financial corporations (PFCs and PNFCs) and higher education institutions (HEIs). PFCs and PNFCs at all levels of government are liable for payroll tax under the 1995 Competition Principles Agreement between States and the Commonwealth. HEIs are liable for tax in all States.⁷
- 17 The taxable proportion of public sector remuneration is calculated using ABS data on aggregate public sector wages and salaries above the weighted average threshold in ‘commercial’ industries, plus aggregate wages and salaries above the average thresholds in HEIs.⁸ Using data for commercial industries, rather than for PFCs and PNFCs, ensures that the assessment is not affected by an individual State’s classification of its agencies. The taxable proportion is applied to public sector CoE to calculate the public sector part of the revenue base for each State.

CATEGORY CALCULATIONS

- 18 Table 4 shows the calculation of the Payroll tax revenue base.

⁶ Tasmania was the only State to impose payroll tax on general government sector remuneration paid by local governments.

⁷ With the exception of the Australian National University, HEIs were established by State legislation. While they are classified to the general government sector in ABS GFS, HEIs are included in the assessment since they are subject to payroll tax in all States.

⁸ Commercial industries are those in which public sector wages and salaries are predominantly paid by PNFCs nationally. These are Australian and New Zealand Standard Industrial Classification divisions A (agriculture, forestry and fishing), C (manufacturing), D (electricity, gas, water and waste services), I (transport, postal and warehousing), and K (financial and insurance services).

Table 4 Calculating the Payroll tax revenue base by State, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Private Sector									
CoE (\$b)	231	166	124	86	38	10	11	8	674
Taxable proportion (%)	69.6	69.3	67.1	73.4	62.6	62.3	63.1	75.1	69
Taxable CoE (\$b)	161	115	83	63	24	6	7	6	465
Public Sector									
CoE (\$b) (a)	55	40	37	20	14	4	14	3	187
Taxable proportion (%)	19.3	19.2	17.6	17	14.1	23	11.4	9.2	17.7
Taxable CoE (\$b)	11	8	6	3	2	1	2	0	33
Total taxable remuneration (\$b)	171	123	90	67	26	7	9	6	498

(a) Excludes CoE for staff of the Australian Defence Force and Australia's diplomatic missions.

Source: Commission calculation.

19 Table 5 shows the calculation of assessed revenue in 2017-18.

Table 5 Illustrative category assessment, Payroll tax, 2017-18

\$ per capita	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Actual revenue (\$m)	8 782	5 955	3 880	3 246	1 188	352	481	360	24 244
Revenue base (\$m)	171 372	122 824	89 800	66 592	25 595	7 032	8 688	6 041	497 942
Assessed revenue (\$m)	8 344	5 980	4 372	3 242	1 246	342	423	294	24 244
Assessed revenue (\$pc)	1 053	936	881	1 255	721	652	1 016	1 192	979

Source: Commission calculation.

ASSESSMENT ISSUES

- 20 The 2015 Review assessments provided the starting point for the 2020 Review. In April 2018, Commission staff released a draft assessment paper setting out staff proposals for the Payroll tax category. States provided submissions on the proposals. The staff proposals and State submissions are available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).⁹
- 21 In the Commission's view, there are no issues in the Payroll tax assessment. The assessment reflects what States do and is simple. It is based on reliable data and produces a material result. Six States agreed there were no issues with the assessment.

⁹ State submissions often include significant detail and supporting evidence. In this attachment, the Commission responds to the arguments and evidence States presented in their submissions. For the full detail of State submissions, see the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

OTHER ISSUES CONSIDERED BY THE COMMISSION

- 22 There were a number of other issues considered by the Commission, largely in response to concerns raised by States. These issues related to the method for measuring existing disabilities or requests for new disabilities that were not included in the 2015 Review assessment. The main reasons for not assessing certain disabilities identified by States are:
- the conceptual case for a disability has not been established
 - an assessment would not be material, that is, redistribute more than \$35 per capita for any State¹⁰
 - data are not available to make a reliable assessment.

Treatment of diminishing thresholds

- 23 Five States currently impose a single marginal rate of tax on payrolls above a threshold. The other three States have diminishing deduction thresholds, meaning the effective rate increases up to a certain payroll size, above which it is flat.¹¹
- 24 The Commission's approach to average policy means it would take account of diminishing thresholds, if reliable data were available and it were material to do so.
- 25 The ABS has indicated that it is unable to provide wages and salaries disaggregated into several ranges based on size of payroll and the Commission is not aware of any currently available alternative sources of data for a diminishing threshold adjustment that are reliable and policy neutral. In these circumstances, the Commission has continued to reflect the policy of all States to exempt small payrolls, using data above a single weighted average threshold.
- 26 Western Australia argued the threshold adjustment should be removed. It said States may set thresholds to exempt a certain proportion of businesses, or to raise a certain amount of revenue, rather than target threshold firms. No other State has said this is what they do and the Commission does not have evidence that it is common State policy. In practice, States set dollar thresholds. The Commission cannot ascertain with any certainty the reasons why States apply different thresholds, or why they adjust their thresholds over time. The Commission has decided to continue to make the

¹⁰ The Commission has set a materiality threshold for including a disability. The materiality test applies to the total impact the disability has on the redistribution across all revenue or expense categories in which it is assessed. To be included, a disability assessment must redistribute more than \$35 per capita away from an equal per capita assessment for any State.

¹¹ The Queensland deduction is reduced by \$1 for every \$4 by which the payroll exceeds \$1.1 million, with no deduction for payrolls of \$5.5 million or more. The Western Australia deduction is reduced by \$1 for every \$7.82 the payroll exceeds \$850 000, with no deduction for payrolls of \$7.5 million or more. The Northern Territory deduction is reduced by \$1 for every \$4 the payroll exceeds \$1.5 million, with no deduction for payrolls of \$7.5 million or more.

threshold adjustment. It reflects what States do and has a material effect on their assessed revenue capacity.

Source of data for the revenue base

- 27 The ABS data used in the assessment are considered reliable and fit for purpose, although some States have raised concerns about volatility for the small States, arising mainly from revisions to historical years as they move through successive updates.
- 28 The ABS has advised on a number of occasions that the revisions to CoE mainly result from the annual benchmarking process to ensure parity among its three measures of gross domestic product (income, production and expenditure).¹² That process involves revisions to CoE at the national level and, subsequently, at the State level, using data from several ABS surveys, including the Survey of Major Labour Costs and the Australian Industry Survey. Those surveys have smaller sample sizes and, therefore, larger standard errors for the smaller States.
- 29 The Commission considers that, while the revisions may result from statistical processes used by the ABS in compiling the CoE data, the use of these data is consistent with the terms of reference requirement to use the latest available data. It also notes that the ABS places its aggregate CoE estimates in the highest category of accuracy ratings, in contrast to many other components of the national accounts.¹³
- 30 The Commission is not aware of any currently available alternative sources of data that are reliable, fit for purpose and policy neutral. The Business Longitudinal Analysis Data Environment (BLADE) being developed by the ABS and the Department of Industry, Innovation and Science will include data for over two million businesses. It may provide a richer source of data for a future payroll tax assessment and may allow the Commission to revisit an adjustment for diminishing thresholds. That dataset, however, is not expected to be available in time for the 2020 Review.
- 31 The Commission will monitor the BLADE data set over the course of the review and consult with States before making any changes.
- 32 The Commission considers that CoE data, supplemented by data on wages and salaries, best captures State payroll tax capacities.

¹² The ABS compiles a set of supply-use tables each year based on a range of surveys. These are used to balance the three measures of gross domestic product to ensure statistical discrepancies of zero. Usually only three years are revised. However, periodically a full historical revision cycle is undertaken, in which annual benchmarks can be revised through the entire time series (back to June 1960).

¹³ The ABS classifies its national accounts data to four grades of 'subjective accuracy ratings', taking into account standard errors on key survey inputs, impressions about coverage and reliability of administrative data sources and revisions to initial estimates of growth.

Remuneration paid to non-profit organisations

- 33 The ACT proposed an adjustment to remove the remuneration paid by charities and not-for-profit organisations, on the grounds that such remuneration is exempt from payroll tax in all States except Victoria. Based on analysis of data from the Australian Charities Report (ACR), it said an adjustment to exclude remuneration paid by non-profit organisations would have a material impact.
- 34 The Commission could make an adjustment to remove remuneration paid by non-profit organisations, if the necessary data were available and such an adjustment were material. However, the ABS is unable to provide data on remuneration paid by non-profit organisations. Employee expenses prepared for the ACR are classified according to the location of the organisation’s headquarters, rather than the location of the employee. They are likely, therefore, to give an inaccurate picture of remuneration paid in each State by non-profit organisations that operate across several States. The Commission is not aware of any other data sources with which an adjustment could be made. On practicality grounds, therefore, it has decided not make an adjustment to remove remuneration paid by non-profit organisations.

REDISTRIBUTION FROM AN EPC ASSESSMENT

- 35 Table 6 shows the extent to which the assessment for this category differs from an EPC assessment of payroll tax revenue. States with a positive redistribution are assessed to have below average revenue raising capacity and States with a negative redistribution are assessed to have above average revenue raising capacity. In per capita terms, Western Australia, South Australia and Tasmania and the Northern Territory experience the largest redistributions.

Table 6 Redistribution from an EPC assessment, Payroll tax, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	-591	270	486	-714	445	171	-16	-53	1 373
\$ per capita	-75	42	98	-276	258	327	-37	-213	55

Note: The redistribution is the difference from an EPC assessment of category revenues.

Source: Commission calculation.

- 36 The main reasons for the redistributions for each States are:
- New South Wales, Western Australia, the ACT and the Northern Territory have above average taxable remuneration per capita
 - Victoria, Queensland, South Australia and Tasmania have below average taxable remuneration per capita.
- 37 Table 7 shows the per capita taxable CoE in each State (public and private sectors).

Table 7 Per capita taxable CoE, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ave
Taxable CoE (\$pc)	21 634	19 234	18 092	25 775	14 809	13 395	20 870	24 482	20 102

Source: ABS CoE and population data.

UPDATING THE ASSESSMENT

38 As required by the terms of reference, the Commission will incorporate the latest available data in the assessment during the annual updates. This will allow the assessment to reflect changes in State circumstances.

- The following data will be updated annually:
 - ABS CoE data
 - ABS wages and salaries data.

OUTSTANDING ISSUES

39 From the Commission’s perspective, there are no outstanding issues for this assessment.

FURTHER CONSULTATION

40 Before the release of the final report by 28 February 2020, there will be opportunities for consultation on this assessment. For further information about this category, please contact Morgan Moa on morgan.moa@cgc.gov.au.

ATTACHMENT 4

LAND TAX

Summary of proposed changes to the 2015 Review methodology

- The category excludes other land based taxes. They are assessed equal per capita (EPC) in the Other revenue category. In the 2015 Review, they were assessed EPC in this category.
- The assessment discount has been reduced from 25.0% to 12.5%.

1 This attachment contains the Commission’s draft proposals for the Land tax category following consultation with the Commonwealth and States.

REVENUE OVERVIEW

2 States raised \$9.0 billion in land tax in 2017-18, representing 7.1% of total State own-source revenue (Table 1).

Table 1 Land tax by State, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Total revenue (\$m)	3 763	2 579	1 177	833	402	105	134	0	8 993
Total revenue (\$pc)	475	404	237	323	233	200	322	0	363
Proportion of total own-source revenue (%)	8.9	9.2	4.6	4.7	6.1	5.7	5.2	0.0	7.1

Source: Commission calculation using State budget data.

3 The category excludes revenue from other land based taxes,¹ and from the transfer of land ownership. The majority of other land based taxes, property based Fire and Emergency Services Levies (FESLs), are offset against Other expenses (refer to the discussion in Attachment 9 – Other revenue). The remaining other land based taxes

¹ Other land based taxes are made up of property based Fire and Emergency Services Levies and other revenues such as Victoria’s Growth Areas Infrastructure Contribution, metropolitan levies, development and planning levies, parking space levies and the ACT’s Safer Families Levy. States raised \$2.7 billion in other land based taxes in 2017-18, of which \$2.1 billion were property based Fire and Emergency Services Levies.

are assessed equal per capita (EPC) in the Other revenue category. Revenue from the transfer of land ownership is assessed in the Stamp duty on conveyances category.

- 4 Table 2 shows Land tax as a share of total own-source revenue from 2014-15 to 2017-18.

Table 2 Land tax, 2014-15 to 2017-18

	2014-15	2015-16	2016-17	2017-18
Total revenue (\$m)	6 478	7 031	8 193	8 993
Proportion of own-source revenue (%)	5.9	6.2	6.8	7.1

Source: Commission calculation using ABS Government Finance Statistics (GFS) and State budget data.

State role

- 5 States impose land based taxes, although they share the land tax base with local government. States generally impose two types of land based taxes.
- Land tax, which is imposed on the value of taxable land holdings and involves aggregation.² Principal places of residence are exempt.
 - Other land based taxes, which are usually imposed on a per property basis (including principal places of residence) and without aggregation.
- 6 State governments provide a range of concessions to land owners, including rebates on or exemptions from land tax. The biggest exemption is the exemption for principal places of residence.

Commonwealth role

- 7 The Commonwealth imposed land tax between 1910 and 1952, after which it vacated the field. The Commonwealth has no current role in this area.

CATEGORY STRUCTURE

- 8 This category has no components. Table 3 shows the capacity measure (revenue disability) that applies to the Land tax assessment.

² In assessing land tax liability, most States aggregate a land owner's value of land holdings and deduct the value of land that is not taxable (such their principal place of residence).

Table 3 **Category structure, Land tax, 2017-18**

Component	Component revenue	Capacity measure (revenue disability)	Influence measured
	\$m		
Land tax	8 993	Value of land holdings	Recognises that States with a greater total value of taxable land holdings have a greater revenue capacity.
		Value distribution adjustment	Recognises that States with proportionally more high value taxable land holdings, which attract higher rates of tax, have greater revenue capacity.

Source: Commission calculation using budget data.

Category and component revenue

- 9 The main data sources for calculating category revenue are GFS and State budget data.³

ASSESSMENT APPROACH

- 10 The Northern Territory does not impose land tax. Other States impose land tax using a progressive rate above a tax-free threshold.
- 11 States have different approaches to aggregation. Most States impose land tax on the combined value of a land owner's taxable land holdings above a tax-free threshold. The ACT does not; it imposes land tax on an individual property basis.
- 12 States also differ in their treatment of joint ownership. Three States treat joint owners as separate land owners for land tax purposes. New South Wales, Victoria and Queensland add each owner's share of the joint property to their other land holdings. The Commission asks those States to adjust their land holdings data to treat joint owners as separate land owners.

Capacity measure (revenue disability)

- 13 The capacity measure is the adjusted value of taxable land holdings. State Revenue Offices (SROs) provide data on the taxable value of land holdings. Each SRO aggregates the taxable values of its land owners.

³ Unless otherwise stated, category and component revenue for the first two assessment years are sourced from GFS. States provide data for the most recent assessment year because GFS data are not available.

- 14 The Commission also captures the effect of differences in the tax rate applied to taxable land holdings by value range (which captures the progressivity of tax rates).
- 15 An upward adjustment is applied to the ACT's value of taxable land holdings because it does not aggregate a land owner's land holdings. In this attachment, the 2015 Review adjustment of 2.0% is used.⁴ As it does not impose land tax, the Northern Territory's value of taxable land holdings has to be estimated. In this attachment, the 2015 Review adjustment of 0.6%⁵ of the value of other States' land holdings is used.

Data and method

- 16 The Commission obtains data on the value of taxable land holdings from SROs. SROs provide the data by 15 value ranges, which allows the Commission to capture differences in their share of total value of taxable land holdings and the effect of progressive rates of land tax.
- 17 The Commission makes two adjustments to State data. The first adjustment, referred to as the value distribution adjustment (VDA), captures the progressivity of tax rates. For each value range, an effective rate of tax is derived by dividing States' tax collections by their value of taxable land holdings. A State's assessed revenue for that value range — the revenue it would raise if it applied the average tax rate — is derived by multiplying its value of taxable land holdings in that range by the effective rate of tax. The VDA compares this calculation against the assessed revenue derived by applying the average rate of tax (across all value ranges) to each State's total value of taxable land holdings.
- 18 The second adjustment is to discount the assessment.
- 19 Table 4 shows the calculation of total assessed revenue for the category in 2017-18.

⁴ The Commission set this value in the 2010 Review and retained it in the 2015 Review.

⁵ This figure represented the Northern Territory's share of the land tax revenue base in the 2009 Update. In that update, the capacity measure was derived from State Valuers-General data. These data were available for the Northern Territory.

Table 4 Illustrative category assessment, Land tax, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Actual revenue (\$m)	3 763	2 579	1 177	833	402	105	134	0	8 993
Value of taxable land holdings (\$b)	610	426	200	156	72	14	14	9	1 501
Value distribution adjustment	1.131	1.021	0.863	0.903	0.512	0.543	0.645	1.011	1.000
Adjusted value of taxable land holdings (\$b)	690	435	173	141	37	7	9	9	1 501
Undiscounted assessed revenue (\$m)	4 134	2 609	1 034	842	222	45	53	54	8 993
Assessed revenue (\$m)	3 977	2 572	1 130	854	273	63	65	58	8 993
Assessed revenue (\$pc)	502	403	228	331	158	120	156	236	363

Note: A State's undiscounted assessed revenue equals total actual revenue multiplied by its share of adjusted value of taxable land holdings. A 12.5% discount is then applied.

Source: Commission calculation.

CATEGORY CALCULATIONS

20 Table 5 derives the per capita total assessed revenue for each State for the category. It shows how the different parts of the capacity measure move revenues away from an EPC distribution and their effect on States' per capita assessed revenue.

Table 5 Illustrative category assessment, Land tax, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Equal per capita	363	363	363	363	363	363	363	363	363
Value of taxable land holdings	86	32	-106	-2	-98	-180	-145	-129	0
Value distribution adjustment	53	7	-29	-31	-107	-63	-61	2	0
Total assessed revenue	502	403	228	331	158	120	156	236	363

Source: Commission calculation.

ASSESSMENT ISSUES

21 The 2015 Review assessments provided the starting point for the 2020 Review. In April 2018, Commission staff released a draft assessment paper setting out staff proposals for the Land tax category. States provided submissions on the proposals. The staff proposals and State submissions are available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

22 The main assessment issues for the category were:

- whether an adjustment should be made to capture the progressive rates of land tax
 - whether foreign owner surcharges should be separately assessed
 - the treatment of ACT's replacement revenue
 - whether other land based taxes should be differentially assessed
 - whether there is a preferred source of the land value data?
- 23 Generally, States supported investigating each assessment issue. Western Australia was concerned about the policy neutrality of land values and the use of observed tax bases. It favoured a different revenue approach.
- 24 The following sections discuss the main issues for the Land tax category, including State views.⁶

An adjustment to capture the effect of progressive rates of land tax

- 25 States impose land tax progressively above a tax-free threshold. Properties below the tax-free threshold attract no tax. Properties in high value ranges attract a higher rate of tax. Thus, States with a greater proportion of properties in higher value ranges have greater revenue capacity. The Commission captures the effect of progressive rates of tax by assessing revenue capacity by value range.
- 26 Seven States supported continuing to make an adjustment for progressive rates of land tax. Western Australia did not.
- 27 New South Wales asked whether the Commission had tested the materiality of the current value ranges as it might provide an opportunity to simplify the assessment by having fewer value ranges. Western Australia favoured a different revenue approach, one that focused on underlying revenue disabilities. Under this approach, adjustments would not be made for exemption thresholds, differences in scope of taxes or progressive rates of tax. Western Australia said focusing on the underlying revenue base would be more policy neutral, more transparent and better fit the data. It also raised a second concern. It said that, if every State had a policy of exempting a similar proportion of their tax base and if their tax bases were not uniformly distributed, States would give effect to this policy by using different actual thresholds. In these circumstances, replacing States' actual thresholds with an average threshold would distort States' assessed revenue capacities. It would remove a different proportion of each State's tax base.⁷

⁶ State submissions often include significant detail and supporting evidence. In this attachment, we respond to the arguments and evidence States presented in their submissions. For the full detail of State submissions, see the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

⁷ If States' tax bases were not uniformly distributed, using an average threshold would remove a smaller proportion of the revenue base of States with high actual thresholds and remove a larger proportion of the revenue base of States with low actual thresholds.

- 28 The Commission has not tested the materiality of its value ranges, as materiality will change for different States in different years. The reason for fixing the value ranges for the period of the review was to enable States to set up a process for extracting land holdings data in the knowledge that the Commission’s data specifications would not change year to year. On these grounds, in this review the Commission does not intend to change the composition of the value ranges.
- 29 Western Australia’s proposed revenue approach would ignore material features of State tax regimes and involve a significant departure from the ‘what States do’ principle. Compared to the current approach, it would produce materially different assessed revenue capacities. The Commission considers exemption thresholds, differences in scope of taxes or progressive rates of tax reflect what States do and should be captured when measuring State revenue capacity. Ignoring these features produces higher assessed revenue capacities for the fiscally weaker States, meaning they would have to impose taxes and charges at rates above those of fiscally strong States to raise the average revenue. The Commission does not consider this is consistent with determining States’ relative revenue raising capacities and so it does not intend to adopt this proposal.
- 30 If States exempted the same proportion of their tax base then the Commission would consider exempting that proportion from each State’s revenue base. However, no other State has said this is what they do and the Commission does not have evidence it is common State policy. The Commission intends to continue to assess each State’s revenue capacity using its fixed value ranges.
- 31 The Commission intends to continue to make an adjustment for differences in the progressivity of State taxes. It reflects what States do and it has a material effect on their assessed revenue capacity.

Should foreign owner surcharges be separately assessed?

- 32 Four States impose a foreign owner surcharge on residential property. Currently, these surcharges are treated as land tax revenue. They increase the revenue collected and the effective rate of tax. Alternatively, foreign owner surcharges could be separately assessed.
- 33 Six States commented on this issue and they all supported continuing the 2015 Review approach of not separately assessing foreign owner surcharges. South Australia said a separate assessment would require significant additional information. The current treatment captured the effect of surcharges, without adding complexity to the assessment. The Northern Territory said the issue should be revisited if a separate assessment of surcharges became material in the future.
- 34 While State budget documents provide an indication of the revenue raised from these surcharges, they do not provide details of the foreign owned property base.

The Commission would be unable to make a separate assessment without these data. Based on the information available in State budgets, a separate assessment is unlikely to be material compared with the current treatment.

- 35 On both practicality and materiality grounds, the Commission does not intend to undertake a separate assessment of foreign owner surcharges.

Treatment of ACT's replacement revenue

- 36 In 2012-13, the ACT commenced a 20 year program to replace conveyance duty with general rate revenue. In the 2015 Review, the Commission treated that part of the ACT's general rates that was a replacement for its conveyance duty as land revenue. Prior ACT budget documents provided an estimate of this amount, but it has ceased to be published. The ACT would need to provide an estimate if the adjustment was to continue. However, the amount involved is small (around \$30 million) and an adjustment would not be material.
- 37 Five States commented on this proposal. Four supported continuing to make the adjustment, but the ACT did not. It said the Commission did not estimate Northern Territory's foregone land tax revenue and, on consistency grounds, it should not estimate the ACT's foregone conveyance revenue.
- 38 Given a figure is no longer published in the ACT's budget papers and so no reliable estimate is available, and that in any case it is unlikely to be material, the Commission does not intend to include an estimate of the ACT's replacement in the assessment.

Should other land based taxes (including FESLs) be differentially assessed?

- 39 In the 2015 Review, revenue in the general property component (other land based taxes) was assessed EPC. However, the Commission foreshadowed it would replace the EPC assessment with a differential assessment if the revenue became large enough for an assessment to be material. If this were to occur, the Commission would likely assess these revenues using a capacity measure that included principal places of residence, but excluded aggregation. The Commission sought these data from State Valuers-General (VG).
- 40 Six States commented on the proposal to differentially assess other land based taxes. Four States agreed. Western Australia and the ACT did not. Western Australia said the other land based taxes were an eclectic mix of revenues from various sources, not all of which appeared to be clearly linked to land values. On the other hand, the ACT said other land based taxes were charged, at least in part, on the basis of property values. It suggested the two components had the same tax base. It proposed combining both and assessing them using the land tax capacity measure.

- 41 The materiality of this component depends on its size. With the remaining revenues accounting for \$608 million in 2017-18, only by including property based FESLs (\$2.1 billion in 2017-18) would the other land tax revenues be large enough for a separate assessment to be material. However, in the case of FESLs, the Commission intends to offset them against the related expenses component (refer to the discussion in Attachment 9 — Other revenue).
- 42 The Commission considered the ACT's proposal of assessing the remaining other land based taxes with land tax. However, the way States impose land tax is different to the way they impose other land based taxes. For land tax, principal places of residence are exempt and taxable land holdings are aggregated. Other land based taxes are imposed on principal places of residence and aggregation is not used. The Commission does not consider these revenues should be assessed using the Land tax capacity measure.
- 43 On materiality grounds, the Commission intends to assess other land based taxes (other than property based FESLs) EPC in the Other revenue category.

The source of land value data

- 44 The Commission investigated three sources of land value data for land tax:
- land holdings data from SROs
 - land value data from State Valuers-General
 - land values in the National Accounts publication by the Australian Bureau of Statistics.
- 45 None of the sources were ideal. The Commission consulted with States about which data source was the most appropriate for equalisation purposes.
- 46 All States commented on this issue. Seven States supported using SRO data. Western Australia said the choice of data source depended on the choice of assessment method. For example, if the Commission decided to assess land tax using total land values, it should use ABS land value data.
- 47 South Australia said SRO data was the only data source that captured how States imposed land tax. It said it was important the choice of data source captured aggregation, as a third of its land tax revenue arose because of aggregation.
- 48 Two shortcomings with VG and ABS land value data are they do not allow the effects of aggregation to be captured and they require an adjustment to remove principal places of residence. Both are characteristics of how States impose land tax and they materially affect States' assessed revenue capacities.
- 49 The Commission intends to continue to use SRO land holdings data. The data are generally accepted by States and reflect how most States impose land tax. They reflect both aggregation and the exemption for principal places of residence.

OTHER ISSUES CONSIDERED BY THE COMMISSION

50 There were a number of other issues considered by the Commission, largely in response to concerns raised by States. These issues related to the method for measuring existing disabilities or requests for new disabilities that were not included in the 2015 Review assessment. The main reasons for not assessing certain disabilities identified by States are:

- the conceptual case for a disability has not been established
- an assessment would not be material, that is, redistribute more than \$35 per capita for any State⁸
- data are not available to make a reliable assessment.

Are land values too policy influenced to be used?

51 Western Australia said the Commission should not use land values as its capacity measure because they were too policy influenced. It cited a Reserve Bank of Australia report stating zoning policies differentially affected housing prices in the four biggest capitals.⁹ Western Australia said land values were also affected by other State policies (such as those aimed at increasing economic activity). Western Australia said that by basing its capacity measure on land values, the Commission is not removing the effects of State policies. If these State policies increase a State's land tax base, that increase is treated as an increase in its assessed revenue capacity, which Western Australia concludes is inconsistent with policy neutrality.

52 While acknowledging State policies could affect land values, Victoria, Queensland and South Australia did not believe those effects were material.

53 States use land values to levy land tax. The question for the Commission is whether State policies are so different as to have a material effect on the comparability of State land values. The Commission accepts State policies can affect land values. It assesses the lowest three value ranges EPC because of its concerns about the quality of the land value data in those ranges. However, it has no evidence the remaining policy effects are both differential and material.¹⁰ If it had, its assessment options

⁸ The Commission has set a materiality threshold for including a disability. The materiality test applies to the total impact the disability has on the redistribution across all revenue or expense categories in which it is assessed. To be included, a disability assessment must redistribute more than \$35 per capita away from an EPC assessment for any State.

⁹ Kendall R and Tulip P, Research Discussion Paper 2018-03, *The Effect of Zoning on Housing Prices*, Reserve Bank of Australia, Canberra.

¹⁰ In the Commission's elasticity consultancy, its consultants found rates of land tax varied more significantly than for other revenues, with some land tax rates more than 2.5 times higher than the national average. However, even these large differences were not sufficient for an elasticity adjustment to be material.

would be to choose a different capacity measure, increase the discount on the existing measure or move to an EPC assessment.

- 54 The Commission intends to continue to use State land value data as the basis of its land tax capacity measure.

Should an adjustment be made for Victoria's move to annual land valuations?

- 55 Victoria said its properties will be valued annually by its VG, replacing its previous biennial approach. This change would resolve the inconsistency in the previous arrangements where some valuations were undertaken by in-house valuers, some by its VG and some by valuers across municipal boundaries. The annual valuation process means its valuations will be more up-to-date than States where valuations were less frequent. It queried whether an adjustment was required to its land values because of the increased frequency of valuations.
- 56 All States seek to keep their land values contemporary. While some States revalue land less regularly than others, they use benchmarking techniques to bring their values to a common valuation point for the Commission's purposes. There is no evidence to suggest an increased frequency of valuation materially affects a State's land values compared to other States.
- 57 The Commission does not intend to make an adjustment for the increased frequency of Victorian land valuations.

Discounting the land assessment

- 58 In the 2015 Review, the Commission applied a medium (25%) discount to the Land tax assessment. The Commission had concerns about States' SRO data. It noted inconsistencies between States' shares of total land holdings and the distribution of States' land holdings by value range. It also had concerns because it asked three States to adjust their land holdings data to reflect a different treatment of jointly owned properties.
- 59 Six States commented on the discount. They suggested reducing or eliminating it.
- 60 Victoria said if reliable adjustment methods can be found, a discount would not be required. Queensland said it had made improvements in its SRO data, which justified reducing or eliminating the discount. South Australia agreed. While acknowledging the improvement in Queensland data, the ACT noted the Commission had concerns with other States' data when it introduced the discount. If the Commission's concerns have not been completely alleviated, it may be appropriate to reduce rather than eliminate the discount. Tasmania said the Commission had eight years of SRO data with which to assess the comparability of State data. It did not believe there was

sufficient evidence to suggest there were inherent errors or inconsistencies in SRO data, or that any inconsistency had a material impact. The Northern Territory said there was no evidence to suggest there were errors in SRO data. Even if errors were assumed, it was unlikely they had a material effect. It suggested, as a minimum, the discount be reduced to the low (12.5%) discount.

- 61 The Commission discounts when it has concerns about an assessment method or the data it uses. The Commission introduced a discount to the Land tax assessment when it changed the source of its land value data from VG land value data to SRO land holdings data. At the time, New South Wales said the Commission should heavily discount the Land tax assessment if SRO data were used. The Commission discounted the assessment because it had concerns over the comparability of SRO data due to:
- SRO land holdings data being more likely than VG land value data to be affected by State policies
 - asking three States (New South Wales, Victoria and Queensland) to adjust their land holdings data and provide data on a basis consistent with the treatment of joint ownership in three other States (Western Australia, South Australia and Tasmania).
- 62 There is little available information to test the effect that State policies (such as those relating to aggregation and joint owners) have on the data they provide. However, there is some evidence to suggest SRO data may have improved over the last decade:
- the correlation between assessed revenue (using SRO land holdings data) and actual revenue has become stronger, suggesting assessed revenues are tracking actual revenues better
 - there is a more consistency between the land tax and the conveyance assessments than was the case in the 2010 Review, which would be expected as both have a connection to land values
 - Queensland has improved its SRO data.
- 63 Nonetheless, particularly given the adjustments made by the three most populous States to address differences in the treatment of jointly owned properties, the Commission considers there is a case for retaining a discount. However, States' general acceptance of SRO data as being the most appropriate to measure land tax capacity and the improvements in that data suggest a lower discount might be appropriate. Given this, the Commission is inclined to apply the low level discount (12.5%).
- 64 The Commission could consider removing the discount if it had information showing that the effect of the adjustment New South Wales, Victoria and Queensland make in relation to joint ownership and the effect of State aggregation policies were not having a material effect on SRO data.

The treatment of parking space levies

- 65 The ACT said parking space levies were based on the location of such spaces. It said the Commission should look for a different measure of capacity such as the physical size of city central business districts. However, if a suitable measure could not be identified, the levies should be assessed EPC.
- 66 Parking space levies raised \$164 million in 2017-18. This is not big enough for a separate assessment to material.
- 67 The Commission intends, on materiality grounds, to assess parking space levies EPC in the Other revenue category. This is the same treatment to be applied to other land based taxes.

REDISTRIBUTION FROM AN EPC ASSESSMENT

- 68 Table 6 shows the extent to which the assessment for this category differs from an EPC assessment of Land tax. States with a positive redistribution are assessed to have below average revenue raising capacity and States with a negative redistribution are assessed to have above average revenue raising capacity. In per capita terms, South Australia, Tasmania and the ACT experience the largest redistributions.

Table 6 **Redistribution from an EPC assessment, Land tax, 2017-18**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	-1 101	-254	672	84	354	127	86	31	1 355
\$ per capita	-139	-40	135	32	205	243	207	127	55

Note: The redistribution is the difference from an EPC assessment of category revenue.

Source: Commission calculation.

- 69 The main reasons for these redistributions are the differences between States in their per capita value of taxable land holdings and the proportion of their taxable land holdings in higher value ranges.
- 70 The main reasons for the redistributions for each State are:
- the per capita value of taxable land holdings in New South Wales and Victoria exceeded the national average and proportionally more of them were in higher value ranges
 - the per capita value of taxable land holdings in Queensland, South Australia, Tasmania and the ACT were less than the national average and proportionally less of them were in higher value ranges
 - the per capita value of taxable land holdings in Western Australia exceeded the national average, but proportionally less of them were in higher value ranges

- the per capita value of taxable land holdings in the Northern Territory was less than the national average, but proportionally more of them were in higher value ranges.

71 Table 7 provides a summary of the main disabilities contributing to the redistribution from an EPC assessment for this category.

Table 7 Major reasons for the redistribution, Land tax, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Value of taxable land holdings	-682	-207	528	5	169	94	61	32	889
Value distribution adjustment	-419	-47	144	79	185	33	25	-1	466
Total	-1 101	-254	672	84	354	127	86	31	1 355

Note: The redistributions from an EPC assessment are illustrative. Disabilities may not add due to rounding.

Source: Commission calculation.

UPDATING THE ASSESSMENT

72 As required by the terms of reference, the Commission will incorporate the latest available data in the assessment during the annual updates. This will allow the assessment to reflect changes in State circumstances. States' SRO land holdings data will be updated annually.

OUTSTANDING ISSUES

73 From the Commission's perspective, there are three outstanding issue for this assessment. They are the size of:

- the adjustment for the ACT because it does not aggregate a land owner's land holdings
- the adjustment for the Northern Territory to estimate its value of taxable land holdings
- the discount, if one is to be applied.

74 The Commission is seeking State views and any data or analysis that can assist it determine the size of the two adjustments and the discount for the 2020 Review.

FURTHER CONSULTATION

- 75 Before the release of the final report by 28 February 2020, there will be opportunities for consultation on this assessment. For further information about this category, please contact Dermot Doherty at Dermot.Doherty@cgc.gov.au.

ATTACHMENT 5

STAMP DUTY ON CONVEYANCES

Summary of proposed changes to the 2015 Review methodology

- The category excludes Stamp duty on motor vehicle transfers. It is assessed equal per capita in the Other revenue category.
- The adjustment to treat concessional rates of duty for first home owners as an expense is discontinued.
- Where the Commission determines some property transfers should not affect State revenue capacities, they are excluded from the category. They are assessed equal per capita in the Other revenue category. In the 2015 Review, they were assessed equal per capita in this category.
- Duty on non-real property transactions are assessed equal per capita in the Other revenue category. In the 2015 Review, they were differentially assessed in this category.
- Duty on land rich transactions by listed companies are differentially assessed. In the 2015 Review, they were assessed equal per capita in this category.

- 1 This attachment contains the Commission’s draft proposals for the Stamp duty on conveyances category following consultation with the Commonwealth and States.

REVENUE OVERVIEW

- 2 States raised \$20.4 billion in Stamp duty on conveyances in 2017-18, representing 16.2% of total own-source revenue (see Table 1). The category includes revenue from foreign investor surcharges, which are raised by six States.

Table 1 Stamp duty on conveyances by State, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Total revenue (\$m)	8 030	6 930	2 750	1 348	818	255	225	69	20 428
Total revenue (\$pc)	1 014	1 085	554	522	474	485	541	281	825
Proportion of total own-source revenue (%)	18.9	24.6	10.7	7.7	12.3	13.8	8.7	4.8	16.2

Source: Commission calculation using State budget data.

- 3 The category excludes revenue from property transactions the Commission decides should not affect States' revenue capacities, stamp duty on motor vehicle transfers and stamp duty on marketable securities. These revenues are assessed equal per capita (EPC) in the Other revenue category.
- 4 The assessment of stamp duty on motor vehicle transfers has been material in most years since the 2015 Review, but not all years. It was not material in 2017-18. Based on State budget projections, it does not appear likely the assessment will grow sufficiently to return to materiality before the next review. Therefore, the Commission intends to assess these revenues EPC in the Other revenue category.
- 5 Table 2 shows Stamp duty on conveyances as a share of total own-source revenue from 2014-15 to 2017-18.

Table 2 Stamp duty on conveyances, 2014-15 to 2017-18

	2014-15	2015-16	2016-17	2017-18
Total revenue (\$m)	17 050	19 393	20 388	20 428
Proportion of total own-source revenue (%)	15.5	17.0	17.0	16.2

Source: Commission calculation using ABS Government Finance Statistics (GFS) and State budget data.

State role

- 6 States impose stamp duties, including stamp duty on property transfers. The concept of taxable property is broad. It comprises both real property (such as land, houses, apartments, shops, factories, offices etc) and, in three States, non-real property (such as copyrights, goodwill, patents, partnership interests and options to purchase).
- 7 States provide a range of concessions to land owners, including rebates on or exemptions from conveyance duty.

Commonwealth role

- 8 Foreign persons seeking to purchase real estate in Australia may require approval from the Foreign Investment Review Board.
- 9 The Commonwealth also has taxation powers in relation to property, both income tax and capital gains tax. It imposes income tax on rental income earned from property and imposes capital gains tax on profit earned from the sale of property.

CATEGORY STRUCTURE

- 10 The category has no components. Table 3 shows the capacity measure (revenue disability) that applies to the Stamp duty on conveyances category.

Table 3 Category structure, Stamp duty on conveyances, 2017-18

Component	Component revenue	Capacity measure (revenue disability)	Influence measured
	\$m		
Conveyance duties	20 428	Value of land holdings	Recognises that States with a greater total value of property transferred have a greater revenue capacity.
		Value distribution adjustment	Recognises that States with proportionally more high value property transferred, which attract higher rates of tax, have greater revenue capacity.

Source: Commission calculation using State budget data.

Category and component revenue

- 11 The main data sources for calculating category revenue are GFS and State budget data.¹

ASSESSMENT APPROACH

- 12 All States impose conveyance duties using a progressive rate structure. South Australia has abolished conveyance duties on non-residential properties. The ACT has a 20 year plan to phase out conveyance duties, replacing them with general rates. It has abolished conveyance duties on commercial properties valued at less than \$1.5 million.

Capacity measure (revenue disability)

- 13 The capacity measure is the adjusted value of property transferred. State Revenue Offices (SROs) provide data on revenue collected and property transferred by value range.
- 14 The Commission also captures the effect of differences in the value of property transferred by value range, which captures the progressivity of tax rates.

Data and method

- 15 The Commission obtains data on the value of property transferred from SROs. They provide revenue and value of property transferred data by 16 value ranges, which

¹ Unless otherwise stated, category and component revenue for the first two assessment years are sourced from GFS. States provide data for the most recent assessment year because GFS data are not available.

allows the Commission to capture differences in their share of total property transferred and the effect of progressive rates of conveyance duties.

- 16 The Commission makes two adjustments to State data. The first adjustment, referred to as the value distribution adjustment (VDA), captures the progressivity of tax rates. For each value range, an effective rate of tax is derived by dividing States' tax collections by their value of property transferred. A State's assessed revenue for that value range — the revenue it would raise if it applied the average tax rate — is derived by multiplying its value of property transferred in that range by the effective rate of tax. The VDA compares this calculation against the assessed revenue derived by applying the average rate of tax (across all value ranges) to each State's total value of property transferred.
- 17 The second adjustment captures the effect of differences in the scope of States' conveyance duty. These differences include off-the-plan concessions (Victoria) and wider unit trust provisions (Queensland, Western Australia and South Australia).

Component calculations

- 18 Table 4 shows the calculation of total assessed revenue for the Stamp duty on conveyances in 2017-18.

Table 4 Illustrative category assessment, Stamp duty on conveyances, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Actual revenue (\$m)	8 030	6 930	2 750	1 348	818	255	225	69	20 428
Value of property transferred (\$m)	206 203	155 879	88 923	32 096	21 101	7 019	8 610	1 795	521 626
Scope of transactions	1.000	1.028	0.970	0.970	0.970	1.000	1.000	1.000	1.000
Value distribution adjustment	1.078	0.991	0.906	0.940	0.874	0.829	0.921	0.925	1.000
Adjusted value of property transferred (\$m)	222 212	158 684	78 172	29 272	17 897	5 818	7 934	1 660	521 649
Assessed revenue (\$m)	8 702	6 214	3 061	1 146	701	228	311	65	20 428
Assessed revenue (\$pc)	1 099	973	617	444	406	434	746	263	825

Note A State's assessed revenue equals total actual revenue multiplied by that State's share of adjusted value of property transferred.

Source: Commission calculation.

CATEGORY CALCULATIONS

- 19 Table 5 derives the per capita total assessed revenue for each State for the category. It shows how the different parts of the capacity measure move revenues away from an EPC distribution and their effect on States' per capita assessed revenue.

Table 5 Illustrative category assessment, Stamp duty on conveyances, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Equal per capita	825	825	825	825	825	825	825	825	825
Value of property transferred	195	131	-123	-338	-347	-301	-15	-540	0
Scope of adjustment	0	26	-21	-15	-14	0	0	0	0
Value distribution adjustment	79	-9	-64	-28	-58	-90	-64	-21	0
Assessed revenue	1 099	973	617	444	406	434	746	263	825

Source: Commission calculation.

ASSESSMENT ISSUES

- 20 The 2015 Review assessments provided the starting point for the 2020 Review. In April 2018, Commission staff released a draft assessment paper setting out staff proposals for the Stamp duty on conveyances category. States provided submissions on the proposals. The staff proposals and State submissions are available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).
- 21 The main assessment issues for the category were:
- which property transactions should be assessed EPC
 - whether an adjustment should be made to capture the progressive rates of conveyance duty
 - whether adjustments should be made to capture differences in the scope of conveyance duty
 - whether foreign investor surcharges should be separately assessed
 - whether the value of concessional rates of duty to first home buyers should be added back into the category, as part of treating assistance to first home buyers in the same way.
- 22 Generally, States supported investigating each assessment issue. Western Australia was concerned about the use of observed tax bases. It favoured a different revenue approach.
- 23 The following sections discuss the main issues for the Stamp duty on conveyances category, including State views.²

² State submissions often include significant detail and supporting evidence. In this attachment, the Commission responds to the arguments and evidence States presented in their submissions. For the full detail of State submissions, see the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

The treatment of property transactions assessed EPC

- 24 The Commission may determine that some classes of transactions should not affect States' revenue capacities. It assesses them EPC. In the 2015 Review it assessed three classes of transactions EPC.
- Duty on corporate reconstructions. Most States exempt these transactions or refund the duty collected to encourage economic reform.
 - Duty on the sale of major State assets. These transactions arise because of differences in State policies on the ownership of assets.
 - Duty on land rich transactions of listed corporations. These transactions were taxed by a minority of States.³
- 25 The Commission considered two changes for the 2020 Review:
- as only three States now tax non-real property transactions, assessing these transactions EPC
 - as seven States now tax land rich transactions by listed corporations, differentially assessing these transactions.
- 26 A small number of States had issues with the approach to the sale of major State asset sales and the changes to the treatment of non-real property transactions and land rich transactions. Otherwise, States were supportive of the proposed approach.
- 27 Victoria and the ACT disagreed with the proposal to assess duty on the sale of major State assets EPC. Victoria said these transactions should be assessed actual per capita (APC) because they were determined by State circumstances. The ACT said some States were making windfall gains from their sale of major assets and these windfall gains should be differentially assessed.⁴
- 28 The Commission introduced an EPC assessment for duty on the sale of major State assets in the 2004 Review. It did so because it concluded these duties arose from State decisions on which assets to hold and for how long. The Victorian proposal would mean duties from previous asset sales would be assessed EPC, while duties from future asset sales would be assessed APC. Similarly, the ACT's proposal would mean windfall gains from previous asset sales would be assessed EPC, but windfall gains from future asset sales would be differentially assessed. The Commission considers duties from the sale of major State assets arise from State policy choices in relation to which assets to hold and for how long. For this reason, it intends to continue to assess them EPC in the 2020 Review.

³ These transactions were not common, but when they arose they could be large. The Commission assessed them EPC because their ad hoc nature and volatility made it difficult to estimate the missing transactions for States that did not tax them.

⁴ The ACT proposed a method for determining the windfall gain associated with a State asset sale.

- 29 Victoria disagreed with changing to assess duty from non-real property transactions EPC. It said these duties should be assessed APC because all States agreed to abolish them as part of the *Intergovernmental Agreement on the Reform of Commonwealth-State Financial Relations 1999* (the IGA) and not reintroduce them. Victoria believes States that abolished the duty no longer have capacity in this area, whereas States that continue to impose the duty have not met their obligations under the IGA. In the 2015 Review, the Commission did not adopt a similar proposal to assess these transactions APC. It noted States that had not abolished the duty had not been penalised and it concluded the IGA was not binding. Therefore, an APC assessment was not appropriate.
- 30 The issue for the 2020 Review is that only three States impose the duty. This makes it difficult to reliably estimate the missing transactions for the majority of States that do not impose duty on non-real property transactions. It is simpler to remove the transactions for those States that do impose the duty than it is to estimate the missing transactions for those States that do not. Consequently, the Commission intends to assess these duties EPC in the 2020 Review.
- 31 New South Wales and Western Australia disagreed with changing to differentially assess land rich transactions by listed corporations. New South Wales said these transactions should continue to be assessed EPC because there were significant differences in State legislation regarding the land rich landholder test. Western Australia said these transactions were volatile and the transactions in one year bore little or no resemblance to States' ongoing capacities. In addition, because they were large and few in number, these transactions were potentially more sensitive to State policy influence.
- 32 The Commission considers State legislation regarding land rich landholder tests are similar. States may have differing land value thresholds (ranging from zero to \$2 million) but they have the same acquisition thresholds for private and public companies. The Commission introduced an EPC assessment for these transactions in the 2008 Update when only Western Australia taxed them. It retained this treatment in the 2010 and 2015 Reviews because a minority of States taxed them. The reason for changing their treatment in this review is seven States now tax these transactions. Western Australia's observations (they bear little or no resemblance to States' ongoing capacities; they are more prone to policy influence) are also relevant to other large, one-off transactions. It would be difficult for the Commission to justify one treatment for land rich transactions but a different treatment for other large, one-off real property transactions. The inclusion of both types of transactions would be more

reflective of States' land tax capacity. The Commission intends to differentially assess duty from land rich transactions by listed corporations.⁵

- 33 The Commission intends to continue to assess the revenue from some property transactions EPC. It will do so when it concludes those revenues should not affect States' revenue capacities, such as when all or a majority of States exempt a class of transactions, meaning it is difficult to make reliable estimates for missing transactions.
- 34 In the 2015 Review, property transactions assessed EPC were presented in this category. However, the Commission intends to present them in the Other revenue category along with other State revenues assessed EPC.

An adjustment to capture the effect of progressive rates of conveyance duty

- 35 States impose conveyance duty progressively above a tax-free threshold. Property transactions below the tax-free threshold attract no tax. Property transactions in high value ranges attract a higher rate of tax. Thus, States with a greater proportion of property transactions in higher value ranges have greater revenue capacity. The Commission captures the effect of progressive rates of tax by assessing revenue capacity by value range.
- 36 Seven States supported continuing to make an adjustment for progressive rates of conveyance duty. Western Australia did not.
- 37 Western Australia favoured a different revenue approach, one that focused on underlying revenue disabilities. Under this approach, adjustments would not be made for exemption thresholds, differences in scope of taxes or progressive rates of tax. Western Australia said focusing on the underlying revenue base would be more policy neutral, more transparent and better fit the data. It also had other concerns with the assessment. It said that if every State had a policy of exempting a similar proportion of their tax base and if their tax bases were not uniformly distributed, States would give effect to this policy by using different actual thresholds. In these circumstances, replacing States' actual thresholds with an average threshold would distort States' assessed capacities as it would remove a different proportion of each State's tax base.⁶ Western Australia was also concerned that the assessment did not capture the different tax rates applying to different property types.

⁵ Tasmania is the only State not to levy land rich transactions on listed corporations. This duty comprised 1% of conveyance duties in recent years. A 1% adjustment for Tasmania would not be material, redistributing less than \$5 per capita.

⁶ If States' tax bases were not uniformly distributed, using an average threshold would remove a smaller proportion of the revenue base of States with high actual thresholds and remove a larger proportion of the revenue base of States with low actual thresholds.

- 38 Western Australia’s proposed revenue approach would ignore material features of State tax regimes and involve a significant departure from the ‘what States do’ principle. Compared to the current approach, it would produce materially different assessed revenue capacities. The Commission considers exemption thresholds, differences in scope of taxes, or progressive rates of tax reflect what States do and should be captured when measuring State revenue capacity. Ignoring these features produces higher assessed revenue capacities for the fiscally weaker States, meaning they would have to impose taxes and charges at rates above those of fiscally strong States to raise average revenue. The Commission does not consider this is consistent with determining States’ revenue capacities and hence does not intend to adopt this proposal.
- 39 If States exempted the same proportion of their tax base then the Commission would consider exempting that proportion from each State’s revenue base. However, no other State has said this is what they do and the Commission does not have evidence it is common State policy. The Commission intends to continue to assess each State’s revenue capacity using its fixed value ranges.
- 40 While some States apply different tax rates to different property types, the Commission has not previously undertaken an assessment of different property types. To do so, the Commission would require States to provide revenue and value of property transferred data by value range and, in addition, by property type. The current assessment captures the effect of differences in property type, without the added complexity of replicating the assessment for each property type. It is not clear the additional complexity would produce a materially different outcome. On practicality and materiality grounds, the Commission does not intend to undertake separate assessments by property type.
- 41 The Commission intends to continue to make an adjustment for differences in the progressivity of State taxes. It reflects what States do and it has a material effect on their assessed revenue capacity.

Adjustments to capture the effect of differences in the scope of conveyance duty

- 42 The Commission seeks to construct a revenue base that best reflects what States on average do. Where necessary, adjustments may be required to improve the comparability of State revenue bases. This can occur, for example, when one State taxes transactions others do not. These differences in scope can affect revenue bases constructed from the transaction data provided by SROs. If a State taxes a narrower range of transactions, an adjustment may be required to estimate the transactions that are missing from its data. If a State taxes a broader range of transactions, an adjustment may be required to remove those transactions from its data. The Commission seeks to make these adjustments in the simplest and most reliable way.

- Where a majority of States apply duty to particular transactions, the Commission imputes the missing transactions for States that do not.
 - Where a minority of States apply duty to particular transactions, the Commission removes those transactions from the data States provide.
- 43 The Commission considered making three adjustments. The first adjustment would apply to Queensland, Western Australia and South Australia. Their legislation captures a wider range of unit trusts than other States. The adjustment would remove their additional transactions by reducing their revenue bases by 3%.⁷ The second adjustment would apply to States that have abolished duty on specific property transactions. South Australia has abolished duty on non-residential transactions and the ACT has abolished duty on commercial properties below \$1.5 million. The third adjustment would apply to Victoria in relation to its off-the-plan concession.⁸
- 44 Three States commented on whether to make adjustments for differences in the scope of conveyance duty. Two supported this approach, but Western Australia did not. It believed State policy differences could be more effectively controlled through effective rates of tax (that is implicitly) rather than through data adjustments. If underlying revenue disabilities were used, any differences in the scope of transactions would be reflected in higher or lower effective rates of tax and the revenue a State actually collected. A State's tax effort could be assessed by comparing its effective rate of tax against a weighted average effective tax rate.
- 45 Western Australia's approach of comparing a State's effective rate of tax against a weighted average rate of tax complements its proposal to measure revenue capacity using States' underlying revenue disabilities. However, the Commission intends to assess revenue capacity using the value of property transferred. Therefore, if there are differences in the scope of transactions being caught by State legislation, adjustments may be required to improve the comparability of the transactions data being provided by States.
- 46 South Australia and the ACT have confirmed they are able to provide transactions data for those commercial transactions that no longer pay duty. As they will continue to include these transactions in the data they provide, an adjustment is not required.
- 47 Victoria's off-the-plan concession reduces a property's dutiable value and thus the duty payable. When the concession applies, the dutiable value is the purchase price less any construction (or refurbishment) costs after the contract date. New South Wales is concerned Victoria is reporting its off-the-plan transactions by

⁷ The 3% figure was based on data provided by Western Australia and South Australia and reviewed by consultants in the 2010 Review.

⁸ The size of the off-the-plan adjustment for Victoria was based on data provided in the 2010 Review. Victoria provided 2000-01 data implying an adjustment of 2.65%. The Commission's consultant provided 2006-07 data implying an adjustment of 2.81%. The Commission decided on 2.75%.

dutiable value rather than purchase price, which would reduce Victoria's value of transactions. The purpose of the off-the-plan adjustment is to address the lower (dutiable) value reported by Victoria. If Victoria reported its transactions by purchase price, there would be no need for the adjustment. The Commission does not have information that would allow it to move Victoria's off-the-plan transactions to different value ranges as proposed by New South Wales. The Commission will work with Victoria to determine whether it is able to provide its off-the-plan transactions by purchase price. If so, the off-the-plan adjustment can be removed. If not, the adjustment will remain in place.

- 48 Victoria has changed its legislation in relation to its off-the-plan concession. As a consequence of its change, the concession will remain for owner occupiers but be phased out for investors. Once that happens, an adjustment is likely to become immaterial.⁹ Pending discussions with Victoria, the Commission intends to retain the adjustment for the 2020 Review.
- 49 The Commission intends to continue to make policy adjustments to capture differences in the scope of State transactions. It intends to make two adjustments. The first is to remove the transactions caught by three States' wider unit trust provisions. The second is to capture the effect of Victoria's off-the-plan concession.

Should foreign investor surcharges be separately assessed?

- 50 Six States impose a foreign investor surcharge on residential property. Currently, these surcharges are differentially assessed with other property transactions. They add to the revenue collected, increasing the effective rate of tax. Alternatively, foreign investor surcharges could be assessed as a separate component.
- 51 Six States commented on this issue and they all supported continuing the 2015 Review approach. South Australia said a separate assessment would require significant additional information. The current treatment captured the effect of surcharges, without adding complexity to the assessment. The Northern Territory said the issue should be revisited if a separate assessment of surcharges became material in the future.
- 52 While State budget documents provide an indication of the revenue raised from these surcharges, they do not provide details of the foreign investor property base. The Commission would be unable to make a separate assessment without these data. Based on the information available in State budgets, a separate assessment is unlikely to be material compared with the current treatment.

⁹ An adjustment based on its concessions for owner occupiers would redistribute less than \$10 per capita.

- 53 On both practicality and materiality grounds, the Commission does not intend to undertake a separate assessment of foreign investor surcharges.

Should concessional rates of duty for first home owners be treated as an expense?

- 54 States provide assistance to first home buyers in different ways. All States provide a payment to first home owners (that is, a grant). In addition, six States provide assistance by reducing the stamp duty first home owners have to pay (that is, they offer a concessional rate of duty). In the 2015 Review, the Commission assessed both forms of assistance in the same way to ensure a State's method of provision did not affect the way the assistance was treated. This was achieved by converting concessional rates of duty into an expense (a 'grant equivalent')¹⁰, combining it with other first home owner grants and assessing them EPC in the First Home Owners component of the Housing assessment.
- 55 Five States supported continuing this treatment in the 2020 Review. New South Wales did not. It said, compared to other States, the decision to treat concessional rates of duty as an expense imposed additional costs on its budget. The treatment increased the conveyance revenue that was differentially assessed. Therefore, States assessed to have above average revenue capacity (New South Wales and Victoria in 2017-18) were assessed to have the capacity to finance an above average amount of the expense. However, those expenses were assessed EPC in the Housing category, meaning each State was given the capacity to provide the average level of expense. New South Wales said the 2015 Review approach led to a reduction in its GST, imposing an additional cost on its budget compared to other States.
- 56 The Commission notes six States provide both concessional rates of duty and grants. This suggests these States consider them to be different forms of assistance. For that reason, the Commission proposes to also treat them differently. In addition, the Commission notes the concerns raised by New South Wales that the 2015 Review approach of treating concessional rates of duty like grants gives rise to negative GST effects for some States.
- 57 The Commission intends to treat concessional rates of duty as a reduction in States' effective rates of tax. This means they will be assessed in the revenue category in which they are provided rather than assessing them as a 'grant equivalent' in the relevant expense category.

¹⁰ This treatment increased both the revenue in the Stamp duty on conveyances category and the expense in the Housing category.

OTHER ISSUES CONSIDERED BY THE COMMISSION

58 There were a number of other issues considered by the Commission, largely in response to concerns raised by States. These issues related to the method for measuring existing disabilities or requests for new disabilities that were not included in the 2015 Review assessment. The main reasons for not assessing certain disabilities identified by States are:

- the conceptual case for a disability has not been established
- an assessment would not be material, that is, redistribute more than \$35 per capita for any State¹¹
- data are not available to make a reliable assessment.

Should all concessional rates of duty be treated as an expense?

59 In the 2015 Review, the Commission treated concessional rates of duty to first home owners like a grant. This was done to ensure the same treatment of first home owners' assistance, regardless how States provided that assistance. The ACT said this approach should be extended to all concessional rates of duties.

60 Given the Commission intends to treat concessional rates of duty for first home owners differently to grants to first home owners, there is no reason to change the treatment of other concessional rates of duty.

61 The Commission intends to treat concessional rates of duty as a reduction in States' effective rates of tax. This means they will be assessed in the revenue category in which they are provided.

REDISTRIBUTION FROM AN EPC ASSESSMENT

62 Table 6 shows the extent to which the assessment for this category differs from an EPC assessment of conveyance duties. States with a positive redistribution are assessed to have below average revenue raising capacity and States with a negative redistribution are assessed to have above average revenue raising capacity. In per capita terms, Western Australia, South Australia, Tasmania and the Northern Territory experience the largest redistributions.

¹¹ The Commission has set a materiality threshold for including a disability. The materiality test applies to the total impact the disability has on the redistribution across all revenue or expense categories in which it is assessed. To be included, a disability must redistribute more than \$35 per capita away from an EPC assessment for any State.

Table 6 Redistribution from an EPC assessment, Stamp duty on conveyances, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	-2 169	-948	1 032	984	724	205	33	139	3 117
\$ per capita	-274	-148	208	381	419	391	78	561	126

Note: The redistribution is the difference from an EPC assessment of category revenue.

Source: Commission calculation.

63 The main reasons for these redistributions are the differences between States in their per capita value of property transferred and the proportion of their transactions in higher value ranges.

64 The main reasons for the redistributions for each State are:

- the per capita value of property transferred in New South Wales exceeded the national average and proportionally more of its transactions were in higher value ranges
- the per capita value of property transferred in Victoria exceeded the national average, but proportionally less of its transactions were in higher value ranges
- the per capita value of property transferred in the remaining States was less than the national average and proportionally less of their transactions were in higher value ranges.

65 Table 7 provides a summary of the main disabilities contributing to the redistribution from an EPC assessment for this category.

Table 7 Major reasons for the redistribution, Stamp duty on conveyances, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Value of taxable land holdings	-1 543	-838	611	874	599	158	6	133	2 381
Differences in scope of transactions	0	-168	105	38	25	0	0	0	168
Value distribution adjustment	-627	58	317	73	101	47	26	5	627
Total	-2 169	-948	1 032	984	724	205	33	139	3 117

Note: The redistributions from an EPC assessment are illustrative. Disabilities may not add due to rounding.

Source: Commission calculation.

UPDATING THE ASSESSMENT

66 As required by the terms of reference, the Commission will incorporate the latest available data in the assessment during the annual updates. This will allow the assessment to reflect changes in State circumstances. States' SRO data on revenue collected and value of property transferred by value range will be updated annually.

OUTSTANDING ISSUES

- 67 From the Commission’s perspective, there is one outstanding issue for this assessment, namely the size of the two adjustments for differences in the scope of transactions:
- the unit trust adjustment for Queensland, Western Australia and South Australia
 - the off-the-plan adjustment for Victoria.
- 68 The Commission is seeking State views and any data or analysis that can assist it determine the size of these adjustments for the 2020 Review.

FURTHER CONSULTATION

- 69 Before the release of the final report by 28 February 2020, there will be opportunities for consultation on this assessment. For further information about this category, please contact Dermot Doherty at Dermot.Doherty@cgc.gov.au.

ATTACHMENT 6

INSURANCE TAX

Summary of proposed changes to the 2015 Review methodology

- Revenue from fire and emergency levies (FESLs) on insurance has been moved from this category and offset against Other expenses.
- Revenue from workers' compensation duty is included in the category and assessed using the general insurance premiums. In the 2015 Review, it was assessed equal per capita (EPC) in the Other revenue category.
- The capacity measure no longer includes:
 - premiums paid to public insurers
 - premiums paid to private insurers for compulsory third party (CTP) motor vehicle insurance.

- 1 This attachment contains the Commission's draft proposals for the Insurance tax category following consultation with the Commonwealth and States.

REVENUE OVERVIEW

- 2 States raised \$5.3 billion in insurance tax in 2017-18, representing 4.2% of total State own-source revenue (Table 1).

Table 1 Insurance tax by State, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Total revenue (\$m)	1 773	1 299	944	645	460	92	43	46	5 301
Total revenue (\$pc)	224	203	190	250	266	175	104	185	214
Proportion of own-source revenue (%)	4.2	4.6	3.7	3.7	6.9	5.0	1.7	3.2	4.2

Note: As of 1 July 2016, the ACT has abolished insurance tax. Its remaining insurance related revenue is its Ambulance Levy.

Source: Commission calculation using State budget data.

- 3 The category excludes revenue from insurance based fire and emergency services levies (FESLs), which are offset against Other expenses (refer to the discussion in Attachment 9 — Other revenue).
- 4 Table 2 shows the insurance tax share of own-source revenue from 2014-15 to 2017-18.

Table 2 Insurance tax, 2014-15 to 2017-18

	2014-15	2015-16	2016-17	2017-18
Total revenue (\$m)	4 803	4 932	5 139	5 301
Proportion of own source revenue (%)	4.4	4.3	4.3	4.2

Source: Commission calculation using ABS Government Finance Statistics (GFS) and State budget data.

State role

- 5 States impose insurance tax (also known as insurance duty) on various insurance products. The tax is imposed on three broad types of insurance:
 - general insurance, including home and contents, motor vehicle, fire, public and product liability, and professional indemnity
 - compulsory third party (CTP) motor vehicle insurance
 - life insurance.
- 6 Insurance tax is generally levied on insurance companies but passed on to consumers.

Commonwealth role

- 7 The Commonwealth has no role in the imposition of insurance tax. However, it imposes income tax on insurance companies, including in relation to income earned by non-resident insurers for insured risks in Australia.

CATEGORY STRUCTURE

- 8 This category has no components. Table 3 shows the capacity measure (revenue disability) that apply to the Insurance tax assessment.

Table 3 Category structure, Insurance tax, 2017-18

Component	Component revenue	Capacity measure (revenue disability)	Influence measured by disability
	\$m		
Insurance tax	5 301	Value of total general insurance premiums paid to private sector insurers, excluding premiums for workers' compensation and CTP insurance.	Recognises that States with a greater level of insured risk, as measured by total premiums for taxable forms of insurance, have greater revenue capacity.

Source: Commission calculation using budget data.

Category and component revenue

9 The main data sources for calculating category revenue are ABS GFS and State budget data.¹

ASSESSMENT APPROACH

10 States impose duties on three main types of insurance in the following ways.

- **General insurance.** All States except the ACT² impose a fixed rate of duty on premiums for general insurance (such as home and contents, motor vehicle, fire, public and product liability, and professional indemnity insurance). The rate varies between 9% and 11%. Three States (New South Wales, Queensland and Tasmania) apply concessional rates to certain classes of general insurance. Some classes of general insurance are exempt in one or more States.
- **CTP motor vehicle insurance.** Victoria and Western Australia impose a single rate of duty on CTP premiums, while Queensland, South Australia and Tasmania impose a flat fee.³ New South Wales, the ACT and the Northern Territory do not tax CTP insurance.
- **Life insurance.** Three States impose duty on the sum insured. South Australia imposes duty on the annual premiums. Victoria, Western Australia, the ACT and the Northern Territory do not impose duty.⁴

¹ Unless otherwise stated, category and component revenue for the first two assessment years are sourced from ABS GFS. States provide data for the most recent assessment year because GFS data are not available.

² The ACT abolished general insurance duty from 1 July 2016.

³ CTP premiums were exempt from duty in Tasmania, but a flat fee was imposed on the issuance of the certificate. Victoria and Western Australia taxed CTP insurance at the same rate as general insurance.

⁴ Two States have abolished life insurance duty since the 2015 Review: the ACT from 1 July 2016 and the Northern Territory from 1 July 2015.

Capacity measure (revenue disability)

- 11 The capacity measure is the total general insurance premiums paid to private sector insurers, excluding premiums for workers' compensation and CTP insurance.

Data and method

- 12 Revenue capacity is assessed using data from the Australian Prudential Regulation Authority (APRA) on the total general insurance premiums paid to private insurers on insured risks in each State.⁵
- 13 APRA cannot provide life insurance data by State. Life insurance premiums are, therefore, not included in the capacity measure.
- 14 Revenue from life insurance duties are not easily removed from the category and available data suggest they represent less than 5% of insurance tax revenue. On practicality grounds, the Commission leaves life insurance duties in the category and assesses it using general insurance premiums.

Adjustments to the capacity measure

- 15 Three additional adjustments are made to the APRA premiums data.
- Insurance based FESLs revenue is included in APRA's premium data. It has been removed so as not to overstate the capacities of New South Wales and Tasmania to raise insurance tax.
 - Privately underwritten workers' compensation premiums have been removed as they are only taxed by one State but represent a large proportion of total premiums across all States. Including workers' compensation premiums would misrepresent States' relative capacities to raise insurance tax.
 - Privately underwritten CTP premiums have been removed as they are significantly policy influenced.

⁵ The APRA data cover general insurers in the private sector. They are insurers regulated by APRA. The data does not include premiums for reinsurance or private health insurance, which are not liable for insurance tax in any State.

CATEGORY CALCULATIONS

16 Table 4 shows the derivation of the revenue base for the category in 2017-18.

Table 4 Derivation of revenue base, Insurance tax, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Premiums — APRA	14 371	7 628	7 353	4 093	2 983	729	805	495	38 456
Less insurance based FESLs	-794	0	0	0	0	-18	0	0	-812
Less workers' compensation premiums (privately underwritten)	-193	-11	-3	-881	-14	-167	-186	-153	-1 607
Less CTP premiums (privately underwritten)	-2 328	0	-994	0	-374	0	-149	0	-3 845
Revenue base	11 056	7 617	6 356	3 212	2 596	544	470	342	32 192

Source: Premiums data from APRA. FESL data provided by States.

17 Table 5 shows the calculation of assessed revenue for each State in 2017-18.

Table 5 Illustrative category assessment, Insurance tax, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Actual revenue (\$m)	1 773	1 299	944	645	460	92	43	46	5 301
Revenue base (\$b)	11 056	7 617	6 356	3 212	2 596	544	470	342	32 192
Assessed revenue (\$m)	1 821	1 254	1 047	529	427	90	77	56	5 301
Assessed revenue (\$pc)	230	196	211	205	247	171	186	228	214

Source: Commission calculation.

ASSESSMENT ISSUES

18 The 2015 Review assessments provided the starting point for the 2020 Review. In December 2017, Commission staff released a draft assessment paper setting out staff proposals for the Insurance tax category. States provided submissions on the proposals. The staff proposals and State submissions are available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

19 The main assessment issues for the category were the treatment of:

- insurance based FESLs
- duty on workers' compensation insurance
- CTP insurance premiums.

20 The following sections discuss the main issues for the Insurance tax category, including State views.⁶

Insurance based FESLs

- 21 Two States (New South Wales and Tasmania) levy insurance based FESLs. The other States impose FESLs on property or motor vehicles.⁷ In the 2015 Review, insurance based FESLs were assessed in the Insurance tax category, since the Commission considered they were raised on a similar basis to other insurance taxes.
- 22 Most States supported an assessment of insurance based FESLs in the Insurance tax category.⁸ South Australia said that approach correctly considered the underlying nature of FESLs and better captured States' capacities to generate FESLs revenue. The ACT said including insurance based FESLs in the category reflected 'what States do', was consistent with the Commission's approach to average policy, and made the assessment transparent. The Northern Territory said the alternative – a joint assessment of FESLs on insurance, land and motor vehicles – may not satisfy simplicity and materiality objectives.
- 23 In contrast, New South Wales argued that the Commission should classify FESLs as user charges and assess them on an equal per capita (EPC) basis. While it acknowledged that FESLs are taxes according to the strict definition⁹, it said they share many characteristics with user charges. Specifically, it said that the amount of revenue raised largely depended on what States expected to spend on fire and emergency services. It said that FESLs were the only tax where the rate of tax was 'back solved' to achieve a pre-determined level of revenue.
- 24 The Commission intends to treat insurance based FESLs as user charges, since the level of FESLs revenue depends on a State's costs of providing emergency services, rather than its taxable insurance tax capacities. Therefore, the Commission intends to remove insurance based FESLs from this category and offset them against emergency services expenses in the Other expenses category (refer to the discussion in Attachment 9 – Other revenue).

⁶ State submissions often include significant detail and supporting evidence. In this attachment, we respond to the arguments and evidence States presented in their submissions. For the full detail of State submissions, see the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

⁷ The exception is the Northern Territory which funds its emergency services out of general revenue.

⁸ Most States supported assessing FESLs on insurance, land and motor vehicles in their respective revenue categories. New South Wales and Victoria did not. Victoria supported the inclusion of insurance based FESLs in Insurance tax, but argued that property based FESLs should be treated as a user charge and assessed EPC.

⁹ FESLs are taxes since they involve no *direct* link between what people pay and the service they receive.

Workers' compensation duty

- 25 Only Queensland imposes duty on workers' compensation¹⁰ and it does so at a concessional rate of 5%.¹¹ Data for 2017-18 indicate that workers' compensation premiums represented about 18% of total general insurance premiums, but the duty raised on those premiums represented only about 2% of total insurance tax revenue. The small amount of revenue raised means that a separate assessment of workers' compensation duty using workers' compensation premiums is not material at the \$35 per capita threshold.
- 26 New South Wales said the level of workers' compensation premiums in each State reflected government policies on the level of benefits and the institutional structure of the sector. South Australia argued that workers' compensation insurance, a statutory obligation on employers' payrolls, was different from most other forms of general insurance. The New South Wales concern principally relates to the degree of policy influence on workers' compensation premiums.
- 27 The Commission observes that the distribution across States of workers' compensation premiums is sufficiently different from the distribution of other general insurance premiums, and that including total workers' compensation premiums with other general insurance premiums produces a materially different assessment outcome (compared with using general insurance premiums only). Therefore, the Commission considers that an assessment using the combined premiums is likely to misrepresent States' capacities to raise insurance tax. The Commission intends to continue to exclude workers' compensation premiums from the revenue base.¹²
- 28 There is a separate question about the treatment of workers' compensation duty. The Commission has two options for treating workers' compensation duty. It could leave that revenue in the category and assess it using general insurance premiums (excluding workers' compensation premiums). Alternatively, it could remove the revenue from the category and assess it EPC in the Other revenue category (as it did in the 2015 Review).
- 29 Given the immateriality of a separate assessment of workers' compensation duty, on practicality grounds, the Commission intends to leave this revenue in the Insurance tax category¹³ and assess it using general insurance premiums (excluding workers' compensation).

¹⁰ South Australia has a provision in its legislation for imposition of duty in relation to workers' compensation for employees over the age of 25, but its public workers' compensation provider is exempt from duty under its own legislation.

¹¹ Queensland applied a tax rate of 9% to most classes of general insurance in 2017-18.

¹² This includes premiums for privately and publicly underwritten workers' compensation insurance.

¹³ Tax revenue raised on workers' compensation insurance is included with insurance tax in GFS.

- 30 Most States supported this approach. Queensland and Western Australia said it would not make a material difference but would simplify the assessment. The ACT said the change would better reflect what States do. The Northern Territory said that combining revenues raised on the same basis in the same category was consistent with the Commission's approach to average policy.

Duty on CTP insurance

- 31 CTP insurance is required for every vehicle registered in Australia. CTP insurance is publicly underwritten in four States and privately underwritten, with a choice of insurer, in the remaining four.
- 32 Five States impose duty on CTP insurance premiums and three do not. In the 2015 Review, the Commission included revenue from CTP duty in the category and total CTP insurance premiums in its capacity measure.
- 33 CTP insurance duty cannot be reliably separated from other insurance tax revenue in GFS.¹⁴ Partial data for three States suggest that the total revenue collected is likely to be at most \$350 million (compared to total insurance tax revenue of \$5.3 billion). Based on this figure, a separate assessment of duty on CTP insurance is unlikely to be material. On practicality and materiality grounds, the Commission intends to leave revenue from CTP duty in the category.
- 34 The further question is whether CTP premiums should be included in its capacity measure.
- 35 In this review, New South Wales argued that CTP insurance premiums should be removed from the capacity measure. It said those premiums were affected by policy differences unrelated to underlying taxable capacity, including private or public underwriting, levels of coverage and benefits, and differences in claims management. In addition, New South Wales argued that tax revenue collected on CTP premiums should be assessed on an EPC basis. No other State commented on CTP insurance.
- 36 Total CTP premiums paid in a State depend not only on the level of premiums, but on the number of vehicles registered, which States do not directly control. Nevertheless, the Commission accepts States have a significant degree of policy control over the level of CTP insurance premiums. For instance, premiums for both publicly and privately underwritten schemes are generally subject to approval by a State regulator. The level of premiums usually depends on characteristics of the vehicle and the driver, but typically regulators set maximum rates for the assumptions. Regulated prices for private insurers typically allow a reasonable profit.
- 37 To the extent that total CTP premiums are policy influenced, removing those premiums would improve the policy neutrality of the assessment. It would also be

¹⁴ Revenue from CTP duty is not consistently reported in GFS for all five States that impose duty.

consistent with the treatment of workers' compensation duty, where the duty is left in the category and assessed using general insurance premiums. The Commission intends to exclude total premiums paid to public and private insurers for CTP insurance.¹⁵

- 38 The removal of publicly underwritten CTP premiums, together with the exclusion of workers' compensation premiums, means that the only remaining public insurer premiums in this assessment's capacity measure will be those relating to builders' warranty insurance (BWI) in the three States that have public BWI schemes (New South Wales, Victoria and Queensland). Similarly to CTP insurance and workers' compensation, total premiums raised for BWI are significantly affected by differences in State policies.¹⁶ Therefore, the Commission intends also to exclude those premiums from its capacity measure.
- 39 The Commission intends to exclude total premiums paid to public insurers from the revenue base and to assess insurance tax revenue using the general insurance premiums paid to private sector insurers excluding premiums for workers' compensation and CTP insurance. This does not result in a materially different outcome from the 2015 Review.

OTHER ISSUES CONSIDERED BY THE COMMISSION

- 40 There were a number of other issues considered by the Commission, largely in response to concerns raised by States. These issues related to the method for measuring existing disabilities or requests for new disabilities that were not included in the 2015 Review assessment. The main reasons for not assessing certain disabilities identified by States are:
- the conceptual case for a disability has not been established
 - an assessment would not be material, that is, redistribute more than \$35 per capita for any State¹⁷
 - data are not available to make a reliable assessment.

¹⁵ Total CTP premiums paid to private insurers are separately identified in the APRA data and can be readily removed from the revenue base. Total CTP premiums paid to public insurers would no longer need to be added to the APRA data.

¹⁶ Three States have publicly underwritten schemes, three require privately underwritten insurance for building works above a certain value and two have no legal requirement for BWI. The total premiums collected for privately underwritten BWI are likely to be relatively small.

¹⁷ The Commission has set a materiality threshold for including a disability. The materiality test applies to the total impact the disability has on the redistribution across all revenue or expense categories in which it is assessed. To be included, a disability assessment must redistribute more than \$35 per capita away from an equal per capita assessment for any State.

REDISTRIBUTION FROM AN EPC ASSESSMENT

41 Table 6 shows the extent to which the assessment for this category differs from an EPC assessment of Insurance tax. States with a positive redistribution are assessed to have below average revenue raising capacity and States with a negative redistribution are assessed to have above average revenue raising capacity. In per capita terms, South Australia and Tasmania experience the largest redistributions.

Table 6 Redistribution from an EPC assessment, Insurance tax, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	-125	112	16	24	-58	23	12	-4	186
\$ per capita	-16	18	3	9	-33	43	28	-14	8

Note: The redistribution is the difference from an EPC assessment of category revenue.

Source: Commission calculation.

42 The main reasons for these redistributions are the differences between States in their assessed per capita taxable private sector insurance premiums.

43 Table 7 shows the assessed per capita private sector insurance premiums.

Table 7 Assessed per capita private sector insurance premiums, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Assessed insurance premiums (\$pc)	1 396	1 193	1 281	1 243	1 502	1 036	1 128	1 386	1 300

UPDATING THE ASSESSMENT

44 As required by the terms of reference, the Commission will incorporate the latest available data in the assessment during the annual updates. This will allow the assessment to reflect changes in State circumstances. APRA data on the value of total taxable premiums by State will be updated annually.

OUTSTANDING ISSUES

45 From the Commission's perspective, there are no outstanding issues for this assessment.

FURTHER CONSULTATION

- 46 Before the release of the final report by 28 February 2020, there will be opportunities for consultation on this assessment. For further information about this category, please contact Morgan Moa on morgan.moa@cgc.gov.au.

ATTACHMENT 7

MOTOR TAXES

Summary of proposed changes to the 2015 Review methodology

- The split of light and heavy vehicle registration fees has been updated.

- 1 This attachment contains the Commission’s draft proposals for the Motor taxes category following consultation with the Commonwealth and States.

REVENUE OVERVIEW

- 2 States raised \$7.9 billion in motor tax revenues in 2017-18, representing 6.3% of total own-source revenue (see Table 1). The category includes revenue from annual registration fees and associated charges levied by States on vehicle owners, or collected by the Commonwealth¹ and passed to States.

Table 1 Motor taxes by State, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Total revenue (\$m)	2 774	1 551	1 776	1 008	469	145	134	52	7 910
Total revenue (\$pc)	350	243	358	390	271	277	323	211	319
Proportion of total own-source revenue (%)	6.5	5.5	6.9	5.7	7.1	7.9	5.2	3.6	6.3

Source: Commission calculation using State budget data.

- 3 The category excludes revenue from stamp duty collected on compulsory third party motor vehicle insurance, stamp duty on the transfer of motor vehicle ownership and from driver licence and permit fees. The former is assessed in the Insurance tax category and the other revenue streams are assessed in the Other revenue category.²

¹ The Federal Interstate Registration Scheme is an alternative to State based registration for heavy vehicles. The revenue is collected by the Commonwealth and passed to States.

² Consistent with the treatment of Fire and Emergency Services Levies (FESLs) in the Land tax and Insurance categories, revenue from FESLs imposed on motor vehicles should be offset against Other expenses (refer to the discussion in Attachment 9 — Other revenue). However, the amounts are too small (less than \$10 million) for the adjustment to be material. Therefore, the revenue from FESLs imposed on motor vehicles are assessed in this category.

- 4 Table 2 shows Motor taxes as a share of total own-source revenue from 2014-15 to 2017-18.

Table 2 Motor taxes, 2014-15 to 2017-18

	2014-15	2015-16	2016-17	2017-18
Total revenue (\$m)	7 005	7 290	7 561	7 910
Proportion of total own-source revenue (%)	6.4	6.4	6.3	6.3

Source: Commission calculation using ABS Government Finance Statistics (GFS) and State budget data.

State role

- 5 Motor vehicle registrations are a State responsibility. States impose annual fees and charges to register vehicles.
- 6 State governments may provide concessions to vehicle owners, including rebates on or exemptions from motor vehicle registration fees and charges.

Commonwealth role

- 7 The National Transport Commission (NTC) sets heavy vehicle charges with the aim of recovering heavy vehicle related expenditure on roads. The charges are a combination of annual registration charges and fuel based user charges. States collect the registration charges and the Commonwealth collects the fuel based user charges.
- 8 The Commonwealth also imposes a luxury tax on imported vehicles. A tax of 33% applies to the value of a car above a luxury car tax threshold (currently \$66 331).
- 9 The Commonwealth established the Federal Interstate Registration Scheme (FIRS) as an alternative to State based registration for heavy vehicles weighing more than 4.5 tonnes. The Commonwealth passed the registration fees it collected to States via the Interstate road transport National Partnership Payment (NPP). The Commonwealth intends to close the FIRS scheme. The scheme was closed to new entrants from 1 July 2018 and will cease on 30 June 2019. State transport authorities in participating States will manage, administer and collect revenue from National Heavy Vehicle registration plates. Operators with vehicles garaged in Western Australia or the Northern Territory will move onto a State registration plate. Payments under the Interstate road transport NPP ceased in 2017-18 (although some residual amounts continued until 30 September 2018).
- 10 Table 3 shows the only Commonwealth payment included in the category in 2017-18. It was included in the heavy vehicle registration fees and charges component.

Table 3 Commonwealth payments to the States for the Interstate road transport NPP, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Interstate road transport NPP (\$m)	32	19	7	3	8	0	0	0	69
Interstate road transport NPP (\$pc)	4	3	1	1	5	1	1	1	3

Source: Commonwealth *Final Budget Outcome, 2017-18*.

CATEGORY STRUCTURE

11 The assessment of the Motor taxes category is undertaken in two components:

- light vehicle registration fees and charges³
- heavy vehicle registration fees and charges.

12 Components allow different disability assessments to apply to different revenues.

13 Table 4 shows the category’s assessment structure, the size of each component and the capacity measures (revenue disabilities) that apply.

Table 4 Category structure, Motor taxes, 2017-18

Component	Component revenue	Capacity measure (revenue disability)	Influence measured
	\$m		
Light vehicle registration fees and charges	6 273	Number of light vehicles	Recognises that States with greater numbers of light vehicles have greater revenue capacity.
Heavy vehicle registration fees and charges	1 637	Number of heavy vehicles	Recognises that States with greater numbers of heavy vehicles have greater revenue capacity.

Source: Commission calculation using State budget data.

Category and component revenue

14 The main data sources for calculating category and component revenue are GFS and State budget data.⁴ States also provided revenue data to split annual registration fees between light vehicles and heavy vehicles. Revenue on the Interstate roads transport NPP was sourced from Commonwealth budget documents⁵ and was included in the heavy vehicle registration fees and charges component.

³ Light vehicles are vehicles with a gross vehicle mass of up to 4.5 tonnes. Heavy vehicles are vehicles with a gross vehicle mass in excess of 4.5 tonnes.

⁴ Unless otherwise stated, category and component revenue for the first two assessment years are sourced from GFS. States provide data for the most recent assessment year because GFS data are not available.

⁵ Commonwealth *Final Budget Outcome, 2017-18*

ASSESSMENT APPROACH

Light vehicle registration fees and charges

- 15 Revenue for this component includes light vehicle registration fees that are collected annually, including number plate fees, inspection fees, administration or recording fees and road safety levies.
- 16 States provided data to allow the Commission to split total vehicle registration fees and charges between light and heavy vehicles.

Capacity measure (revenue disability)

- 17 State light vehicle registration fees vary by vehicle weight, engine capacity and vehicle use. The Commission does not seek to adjust for the complexity of these differences.
- 18 The greater the number of light vehicles registered in a State, the greater its capacity to raise revenue. Therefore, the capacity measure for this component is the number of light vehicles registered in each State.

Data and method

- 19 The Commission obtains the number of light vehicles from the ABS' Motor Vehicle Census publication.⁶ The capacity measure is the number of passenger vehicles and the number of light commercial vehicles. These vehicles account for 94%⁷ of light vehicle registrations.

Component calculations

- 20 Table 5 shows the calculation of assessed revenue for the component in 2017-18.

Table 5 Illustrative component assessment, light vehicle registration fees and charges component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Actual revenue (\$m)	2 194	1 226	1 416	804	368	116	107	41	6 273
Number of light vehicles ('000)	5 153	4 541	3 662	1 991	1 303	437	285	145	17 518
Assessed revenue (\$m)	1 845	1 626	1 311	713	467	156	102	52	6 273
Assessed revenue (\$pc)	233	255	264	276	270	298	245	210	253

Note: A State's assessed revenue equals total actual revenue multiplied by that State's share of light vehicles.

Source: Commission calculation using data from ABS, *Motor vehicle Census*, Australia, cat. No. 9309.0.

⁶ ABS, *Motor Vehicle Census*, cat. no. 9309.0, various issues.

⁷ The remaining 6% relate to motor cycles (4.6%), light rigid trucks (0.8%) and campervans (0.4%).

Heavy vehicle registration fees and charges

21 Revenue for this component includes heavy vehicle registration fees that are collected annually, including number plate fees, inspection fees, administration or recording fees and road safety levies. It also includes revenue from the Federal Interstate Registration Scheme that is collected by the Commonwealth and paid to States.

Capacity measure (revenue disability)

22 The National Heavy Vehicle Charging Regime sets the heavy vehicle registration rates States are to apply. The rates vary by vehicle weight, number of axles, body type and trailer use. The Commission does not seek to adjust for the complexity of these differences.

23 The greater the number of heavy vehicles registered in a State, the greater its capacity to raise revenue. Therefore, the capacity measure for this component is the number of heavy vehicles registered in each State.

Data and method

24 The Commission obtains the number of heavy vehicles from the ABS' Motor Vehicle Census publication. The capacity measure is the number of heavy rigid trucks and the number of articulated trucks. These vehicles account for 78%⁸ of heavy vehicle registrations.

Component calculations

25 Table 6 shows the calculation of assessed revenue for the component in 2017-18.

Table 6 Illustrative component assessment, heavy vehicle registration fees and charges component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Actual revenue (\$m)	580	325	361	204	100	29	27	11	1 637
Number of heavy vehicles ('000)	121	112	96	69	32	11	2	6	448
Assessed revenue (\$m)	442	409	351	251	116	41	7	21	1 637
Assessed revenue (\$pc)	56	64	71	97	67	78	16	87	66

Note: A State's assessed revenue equals total actual revenue multiplied by that State's share of heavy vehicles.

Source: Commission calculation using data from ABS, *Motor vehicle Census*, Australia, cat. no. 9309.0.

⁸ The remaining 22% relate to buses (17.3%) and non-freight carrying vehicles (4.2%).

CATEGORY CALCULATIONS

26 Table 7 brings the assessed revenue for each component together to derive the total assessed revenue for each State for the category.

Table 7 Illustrative category assessment, Motor taxes, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Light vehicle registration fees and charges	233	255	264	276	270	298	245	210	253
Heavy vehicle registration fees and charges	56	64	71	97	67	78	16	87	66
Total assessed revenue	289	319	335	373	337	376	261	297	319

Source: Commission calculation.

ASSESSMENT ISSUES

27 The 2015 Review assessments provided the starting point for the 2020 Review. In April 2018, Commission staff released a draft assessment paper setting out staff proposals for the Motor taxes category. States provided submissions on the proposals. The staff proposals and State submissions are available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

28 The main assessment issues for the category were:

- should the split of annual registration fees and charges between light and heavy vehicles be updated
- whether the value of concessional rates of motor vehicle taxes should be treated as a concession in the Welfare category?

29 Generally, States supported investigating each assessment issue.

30 The following sections discuss the main issues for the Motor taxes category, including State views.⁹

Updating the split of light and heavy vehicle registration fees

31 The 2015 Review split of registration fees between light and heavy vehicles was based on 2009 Update data — the last time the Commission assessed these revenues in separate categories. The Commission collected State data to update the split.

⁹ State submissions often include significant detail and supporting evidence. In this attachment, the Commission responds to the arguments and evidence States presented in their submissions. For the full detail of State submissions, see the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

- 32 Five States commented on the proposal. They supported the proposal to update the split.
- 33 Most States provided data. Their data suggested the light vehicle proportion of total registration fees (82.9%) was largely unchanged from the 2009 Update figure (82.3%).
- 34 Given small changes in the proportion are not material, the Commission intends to round the split to 80% for light vehicles and 20% for heavy vehicles for the duration of the 2020 Review.

An adjustment for concessional rates of motor vehicle taxes

- 35 Currently, registration fee revenues are net of concessions. Any motor vehicle concessions provided by States reduce the revenue collected and, therefore, the effective rate of tax. The Commission investigated whether motor vehicle concessions should be treated as an expense (a 'grant equivalent') and be combined with other concessions in the Welfare category.
- 36 Only Victoria and the ACT commented on the proposal and both supported investigating the treatment of concessional rates of tax. The ACT considered concessional rates of duty to be expenses rather than foregone taxes.
- 37 The concessional rates of tax offered by States vary considerably. Almost all offer a concessional rate to a person with a pension concession card (whether provided by Centrelink, the Department of Human Services or the Department of Veterans' Affairs) and to primary producers. However, States offer a range of other concessional rates including for vehicles modified to support wheelchair transport, for Carer's Allowance recipients, for environmentally friendly vehicles, for charitable, benevolent or religious institutions and for specific geographic regions. For the Commission to treat these concessional rates as expenses, it would require information on the amount of the concessional rate and to whom it was provided. The Commission does not currently collect this information.
- 38 State budget documents indicate the biggest concessional rate of duty (\$450 million) is provided to pensioner concession card holders. The Commission tested the materiality of an adjustment by adding this amount to the concessions component of Welfare. Compared with its assessment in the Motor taxes category, this adjustment would have changed States' revenue capacities by less than the \$10 per capita data materiality threshold.
- 39 As discussed in Attachment 5 — Stamp duty on conveyances, the Commission intends to treat concessional rates of duty as a reduction in States' effective rates of tax. This means they will be assessed in the revenue category in which they are provided rather than assessing them as an expense in the Welfare category.

OTHER ISSUES CONSIDERED BY THE COMMISSION

40 No other issues were raised by States.

REDISTRIBUTION FROM AN EPC ASSESSMENT

41 Table 8 shows the extent to which the assessment for this category differs from an equal per capita (EPC) assessment of motor tax revenue. States with a positive redistribution are assessed to have below average revenue raising capacity and States with a negative redistribution are assessed to have above average revenue raising capacity. In per capita terms, Western Australia, Tasmania and the ACT experience the largest redistributions.

Table 8 Redistribution from an EPC assessment, Motor taxes, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	243	4	-77	-139	-31	-30	24	5	277
\$ per capita	31	1	-16	-54	-18	-57	59	22	11

Note: The redistribution is the difference from an EPC assessment of category revenue.

Source: Commission calculation.

42 The main reasons for these redistributions are the differences between States in their per capita number of vehicles and their per capita value of vehicles transferred.

43 The main reasons for the redistributions for each State are:

- the per capita number of heavy and light vehicles in New South Wales and the ACT was less than the national average
- the per capita number of heavy vehicles in Victoria was less than the national average, but the per capita number of light vehicles exceeded the national average
- the per capita number of heavy and light vehicles in Queensland, Western Australia, South Australia and Tasmania exceeded the national average
- the per capita number of light vehicles in the Northern Territory was less than the national average, but the per capita number of heavy vehicles exceeded the national average.

44 Table 9 provides a summary of the main disabilities contributing to the redistribution from an EPC assessment for this category.

Table 9 Major reasons for the redistribution, Motor taxes, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Light vehicles	161	-9	-55	-59	-29	-24	3	11	175
Heavy vehicles	82	14	-23	-81	-2	-6	21	-5	117
Total	243	4	-77	-139	-31	-30	24	5	277

Note: The redistributions from an EPC assessment are illustrative. Disabilities may not add due to rounding.

Source: Commission calculation.

UPDATING THE ASSESSMENT

45 As required by the terms of reference, the Commission will incorporate the latest available data in the assessment during the annual updates. This will allow the assessment to reflect changing State circumstances.

- The following data will be updated annually:
 - the number of light vehicles
 - the number of heavy vehicles.
- Some assessment data will not be updated as they are not readily available on an annual basis, or remain stable over time. The Commission will not be updating the split of registration fees and charges between light and heavy vehicles.

OUTSTANDING ISSUES

46 From the Commission's perspective, there are no outstanding issues for this assessment.

FURTHER CONSULTATION

47 Before the release of the final report by 28 February 2020, there will be opportunities for consultation on this assessment. For further information about this category, please contact Dermot Doherty at Dermot.Doherty@cgc.gov.au.

ATTACHMENT 8

MINING REVENUE

Summary of proposed changes to the 2015 Review methodology

- The Mining revenue assessment methodology is unchanged from the 2015 Review.
 - Minor proposed changes in its application reflect market developments for individual minerals.
- The category excludes Commonwealth payments to Western Australia and the Northern Territory under revenue sharing agreements. They are assessed actual per capita with other Commonwealth payments. In the 2015 Review, they were assessed actual per capita in this category.
- Nickel royalties are assessed in the other minerals component. In the 2015 Review, they were separately assessed.
- Lithium royalties will be separately assessed if it becomes material to do so. Until then, they will be assessed in the other minerals component, as they were in the 2015 Review.

- 1 This attachment contains the Commission’s draft proposals for the Mining revenue category following consultation with the Commonwealth and States.

REVENUE OVERVIEW

- 2 States raised \$12.0 billion in mining revenue in 2017-18, representing 9.5% of total own-source revenue (see Table 1). The table shows royalties are concentrated in three States — New South Wales (14.8%), Queensland (36.0%) and Western Australia (43.3%). This reflects the dominance of coal and iron ore royalties.

Table 1 Mining revenue by State, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Total revenue (\$m)	1 763	102	4 297	5 171	237	41	0	341	11 951
Total revenue (\$pc)	223	16	866	2 002	137	79	0	1 380	482
Proportion of total own source revenue (%)	4.2	0.4	16.8	29.4	3.6	2.2	0.0	23.6	9.5

Source: Commission calculation using State budget data.

3 The category includes State royalties, but excludes payments received by States under revenue sharing agreements with the Commonwealth. Western Australia receives two payments and the Northern Territory one.¹ These payments are treated as Commonwealth payments.²

4 Table 2 shows Mining revenue as a share of total own-source revenue from 2014-15 to 2017-18.

Table 2 Mining revenue, 2014-15 to 2017-18

	2014-15	2015-16	2016-17	2017-18
Total revenue (\$m)	8 405	7 923	11 230	11 951
Proportion of total own-source revenue (%)	7.7	6.9	9.4	9.5

Source: Commission calculation using ABS Government Finance Statistics (GFS) and State budget data.

State role

5 The Commonwealth and States both impose royalties. The Commonwealth and Western Australia share revenues in relation to the Barrow Island and the North West Shelf (NWS) projects. The Commonwealth and the Northern Territory share revenues in relation to uranium.

6 States own most minerals located on or below the surface of their land (a small proportion are privately owned) and onshore oil and gas. The delineation for onshore oil and gas is the low-water mark of the Australian continent. However, the Commonwealth has conferred, through agreements, certain rights to States over minerals located within three nautical miles of the low-water mark (coastal waters). Thus, States have the power to impose royalties landward of coastal waters.

Commonwealth role

7 The Commonwealth has the power to impose royalties seaward of coastal waters.

¹ Western Australia receives a payment in relation to royalties from the North West Shelf project and a payment for the loss of royalty revenue resulting from the Commonwealth's removal of the exemption of condensate from crude oil excise. The Northern Territory receives a payment in relation to uranium.

² See Attachment 2 — Commonwealth payments.

- 8 Prior to 1 July 2012, the Commonwealth applied a Petroleum Resource Rent Tax (PRRT) to offshore petroleum projects in offshore waters. From 1 July 2012, its PRRT was extended to all offshore and onshore oil and gas projects, including the NWS, oil shale and coal seam gas projects.

CATEGORY STRUCTURE

- 9 The assessment of Mining revenue is undertaken in seven mineral components:
- iron ore
 - coal
 - bauxite
 - onshore oil and gas
 - gold
 - copper
 - other minerals.³
- 10 Components allow different disability assessments to apply to different revenues.
- 11 Table 3 shows the category's assessment structure, the size of each component and the capacity measures (revenue disabilities) that apply.

Category and component revenue

- 12 The main data sources for calculating category revenue are ABS Government Finance Statistics (GFS) and State budget data.⁴

ASSESSMENT APPROACH

- 13 In most States, mining royalties are based on a percentage of the value of production or an amount per tonne of production. In Tasmania, some royalties are based on mine profitability. In the Northern Territory, royalties are based wholly on profitability.
- 14 Royalties vary from State to State and for most minerals. However, there is a common pattern.

³ For confidentiality reasons the Commission is unable to publish data on its bauxite and onshore oil and gas assessments. Separate assessments are undertaken for each mineral. Confidentiality is achieved by combining the assessments and reporting them as part of other minerals.

⁴ Unless otherwise stated, category and component revenue for the first two assessment years are sourced from GFS. States provide data for the most recent assessment year because GFS data are not available in time for the Commission to incorporate them.

- Low value minerals (such as salt, sand and gravel) are subject to volume based royalties.
- Hard rock minerals (such as nickel, copper and gold) attract relatively low royalty rates. Iron ore is an exception, being a higher quality hard rock mineral that attracts a relatively high royalty rate.
- Soft rock or shallowly mined minerals (such as bauxite and coal) attract a relatively high royalty rate.
- Onshore oil and gas attracts a high royalty rate.

Table 3 Category structure, Mining revenue, 2017-18

Component	Component revenue	Capacity measure (revenue disability)	Influence measured
	\$m		
Iron ore	4 467	Value of production	Recognises that States with greater value of production have greater revenue capacity.
Coal	5 528	Value of production	Recognises that States with greater value of production have greater revenue capacity.
Gold	460	Value of production	Recognises that States with greater value of production have greater revenue capacity.
Copper	282	Value of production	Recognises that States with greater value of production have greater revenue capacity.
Other minerals (a)	1 214	Value of production	Recognises that States with greater value of production have greater revenue capacity.

(a) For confidentiality reasons the Commission is unable to publish data on its bauxite and onshore oil and gas assessments. The figure shown here is an aggregation of the bauxite, onshore oil and gas and other minerals assessments.

Source: Commission calculation using State budget data.

15 Table 4 shows the effective royalty rates on selected minerals in 2017-18. States that have proportionally more of the minerals attracting higher royalty rates have additional revenue capacity.

Table 4 Effective royalty rates for selected minerals, 2017-18

	Onshore oil and gas (a)	Bauxite	Coal	Iron ore	Copper	Gold	Other minerals
	%	%	%	%	%	%	%
Effective rate	10.0	8.9	8.2	7.1	4.0	2.8	4.1

(a) This figure has been rounded for confidentiality reasons.

Source: State provided mineral data.

Capacity measure (revenue disability)

16 The capacity measure for each mineral is its value of production.

Data and method

17 The Commission obtains data on revenue and value of production by mineral from State Revenue Offices (SROs).

18 As Table 4 showed, different minerals attract different royalty rates. The Commission captures this difference by separately assessing six minerals and grouping the remaining minerals together. The Commission uses the SRO data to determine which minerals should be separately assessed and which should be grouped together in the other minerals component. The minerals separately assessed are those that generate most royalty revenue.

Component calculations

19 Table 5 to Table 9 show the calculation of assessed revenue for each component in 2017-18. As some State revenue data are confidential, the tables show total actual revenue only.

Table 5 Illustrative component assessment, iron ore component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Actual revenue (\$m)									4 467
Value of production (\$m)	0	0	0	61 692	522	384	0	0	62 597
Assessed revenue (\$m)	0	0	0	4 402	37	27	0	0	4 467
Assessed revenue (\$pc)	0	0	0	1 704	22	52	0	0	180

Note: A State's assessed revenue equals total actual revenue multiplied by the State's share of value of production.

Source: Commission calculation using State provided data.

Table 6 Illustrative component assessment, coal component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Actual revenue (\$m)									5 528
Value of production (\$m)	22 176	1 893	42 730	332	0	27	0	0	67 157
Assessed revenue (\$m)	1 825	156	3 517	27	0	2	0	0	5 528
Assessed revenue (\$pc)	230	24	709	11	0	4	0	0	223

Note: A State's assessed revenue equals total actual revenue multiplied by the State's share of value of production.

Source: Commission calculation using State provided data.

Table 7 Illustrative component assessment, gold component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Actual revenue (\$m)									460
Value of production (\$m)	1 930	586	936	11 400	503	56	0	814	16 225
Assessed revenue (\$m)	55	17	27	323	14	2	0	23	460
Assessed revenue (\$pc)	7	3	5	125	8	3	0	93	19

Note: A State's assessed revenue equals total actual revenue multiplied by the State's share of value of production.

Source: Commission calculation using State provided data.

Table 8 Illustrative component assessment, copper component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Actual revenue (\$m)									282
Value of production (\$m)	1 493	0	1 953	1 332	2 238	67	0	0	7 084
Assessed revenue (\$m)	59	0	78	53	89	3	0	0	282
Assessed revenue (\$pc)	8	0	16	21	52	5	0	0	11

Note: A State's assessed revenue equals total actual revenue multiplied by the State's share of value of production.

Source: Commission calculation using State provided data.

Table 9 Illustrative component assessment, other minerals component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Actual revenue (\$m)									1 214
Share of value of production (%)	4	4	32	33	10	3	0	14	100
Assessed revenue (\$m)	49	47	389	395	127	35	0	173	1 214
Assessed revenue (\$pc)	6	7	78	153	73	67	0	702	49

Note: A State's assessed revenue equals total actual revenue multiplied by the State's share of value of production.

For confidentiality reasons the Commission is unable to publish data on its bauxite and onshore oil and gas assessments. The assessment shown here is an aggregation of the bauxite, onshore oil and gas and other minerals assessments.

Source: Commission calculation using State provided data.

CATEGORY CALCULATIONS

20 Table 10 brings the assessed revenue for each component together to derive total assessed revenue for each State for the category.

Table 10 Illustrative category assessment, Mining revenue, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Iron ore	0	0	0	1 704	22	52	0	0	180
Coal	230	24	709	11	0	4	0	0	223
Gold	7	3	5	125	8	3	0	93	19
Copper	8	0	16	21	52	5	0	0	11
Other minerals (a)	6	7	78	153	73	67	0	702	49
Total assessed revenue	251	34	808	2 013	155	131	0	795	482

(a) For confidentiality reasons the Commission is unable to publish data on its bauxite and onshore oil and gas assessments. The assessment shown here is an aggregation of the bauxite, onshore oil and gas and other minerals assessments.

Source: Commission calculation.

ASSESSMENT ISSUES

- 21 The Treasurer has written to the Commission⁵ in relation to the terms of reference for the 2020 methodology review indicating that ‘the Commission [is] not to consider changes to the mining royalties methodology as part of the 2020 review’.
- 22 Accordingly, the 2015 Review assessments provided the starting point for the 2020 Review.
- 23 Prior to these developments, in April 2018, Commission staff released a draft assessment paper setting out staff proposals for the Mining revenue category. States provided submissions on the proposals. The staff proposals and State submissions are available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

⁵ The Treasurer’s letter is available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

Box 1 The Mining assessment over time

The Commission has changed its methodology for assessing mining revenue capacity over time. By its nature, mining has large cycles of activity. These changing cycles of activity, combined with a highly skewed distribution of some minerals across States, has meant that developing a methodology that appropriately captures the effect mining activity has on State fiscal capacities has posed greater challenges than other areas of State revenue. Shifting circumstances have shaped the methods used by the Commission.

In the equalisation system, the purpose of the Mining assessment is to capture the growing disparities in States' revenue raising capacity arising from the increasing demand for Australia's mineral commodities.

The Commission's judgment has been that differences in royalty rates for different minerals mainly reflect differing circumstances (including underlying profitability) of the different mining sectors, rather than discretionary policy choices. This favours assessing revenue capacity separately for each major mineral, which is the approach the Commission has adopted since 2015. The Commission considers that its current Mining assessment reliably assesses States' revenue capacities and appropriately contributes to achieving Horizontal Fiscal Equalisation (HFE).

However, where one State has a dominant role in the production of a mineral, this approach means the dominant State's own royalty rate largely determines the average rate applied in the assessment of revenue capacity. This carries a risk to policy neutrality, since any consideration of royalty rate changes by the dominant State may be influenced by its expectation of an offsetting change to its grant share.

In practice, the policy neutrality risk has been significant only for Western Australia. The new HFE arrangements under the *Treasury Laws Amendment (Making Sure Every State and Territory Gets Their Fair Share of GST) Act 2018* substantively mitigate that risk.

- 24 The following sections discuss the main issues for the Mining revenue category, including State views.⁶ They include issues raised in response to a discussion paper on improving the policy neutrality of the mining assessment and in State visits.⁷

⁶ State submissions often include significant detail and supporting evidence. In this attachment, we respond to the arguments and evidence States presented in their submissions. For the full detail of State submissions, see the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

⁷ Commonwealth Grants Commission, Staff discussion paper, CGC 2018-07-S, *Improving the policy neutrality of the Mining revenue assessment*, November 2018.

Category composition and structure

Category composition

- 25 While making no changes to the assessment method, the Commission intends to make one change to the category's composition compared to the 2015 Review approach. It is to move the payments to Western Australia and the Northern Territory from the shared revenue projects out of the category and present them with other Commonwealth payments.
- 26 The Commonwealth payments to Western Australia and the Northern Territory under revenue sharing agreements are:
- reduced royalties — a payment to Western Australia to compensate it for the loss of royalty revenue resulting from the Commonwealth's removal of the exemption of condensate from crude oil excise
 - royalties — a payment to Western Australia in relation to the NWS project and a payment to the Northern Territory in relation to uranium.
- 27 In some reviews, the Commission presented the payments to Western Australia and the Northern Territory as mining revenue and in other reviews as Commonwealth payments. Regardless of how they were presented, they were assessed actual per capita (APC).
- 28 For the 2020 Review, the Commission intends to continue to assess these payments APC, but present them with other Commonwealth payments. This is the usual treatment for Commonwealth payments and means that the assessed fiscal capacities (and hence GST revenue shares) of the two affected jurisdictions (Western Australia and the Northern Territory) are not changed.
- 29 Consistent with the 2015 Review methodology, the Commission's intention is for all mining revenues to be assessed in the Mining revenue category. The Commission is aware States are raising, or considering raising, non-royalty mining revenue including:
- Queensland's voluntary contributions for coal producers
 - Western Australia's mining related lease rentals.⁸
- 30 Currently, GFS classifies these non-royalty revenues as 'other' State income, a classification that means the Commission assesses them equal per capita (EPC) in the Other revenue category. This is inconsistent with how royalty revenues are assessed in the Mining revenue category and it could provide an incentive for States to

⁸ There are reports Queensland may set up a \$100 million regional infrastructure fund, to be financed over three years. It would comprise a \$30 million contribution from the State and a \$70 million voluntary contribution from its coal producers. Western Australia applies a 25 cents per tonne fee to some of the State's iron ore production. The fee only applies to projects that have been in operation for more than 15 years. Currently, only BHP, Rio Tinto and Cliffs Natural Resources pay the fee. It raised \$105 million from these revenues in 2017-18.

restructure their mining revenue arrangements with a view to reducing their assessed capacity, so potentially skewing State decision-making.

- 31 This is not a new issue. In the 2003 Update, the Commission treated amounts identified as excess profits from the haulage of black coal in Queensland as mining revenue and added them to the category.
- 32 The Commission's methodology would include non-royalty revenues related to mining, where it is material to do so.
- 33 The Commission is seeking:
- information from States on the scope of any such arrangements and the revenues involved
 - State views on where these non-royalty revenues should be classified in the Commission's adjusted budget and hence how they should be treated in this review.

Category structure

- 34 In the 2015 Review, the Commission said its intention was to retain the Mining revenue category structure until the following review. However, if there was a major change in circumstances, for example if another mineral became material or one of the material minerals became immaterial, the Commission would exercise its judgment on whether equalisation would be improved by changing the structure of the assessment.
- 35 The Commission will retain the same approach in this review.
- 36 Separate assessments of lithium and nickel royalties were not material in the 2019 Update. The materiality of these minerals depends on the level of royalties collected. At \$100 million per year, a separate assessment of either mineral would be material. Western Australia's budget papers suggest lithium royalties will grow over the forward period and a separate assessment of them will become material before the next review (see Table 11). The budget papers also suggest nickel royalties will not grow sufficiently for a separate assessment of them to be material before the next review. Consistent with the 2015 Review methodology, the Commission proposes to:
- discontinue the separate assessment of nickel royalties and assess them in the other minerals component
 - assess lithium royalties separately if and when it becomes material to do so. Until then they will remain in the other minerals component. The Commission considers that, based upon the Western Australian budget papers, once a separate assessment becomes material it will likely remain so for the foreseeable future.

- 37 The Commission intends to continue to exercise its judgment whether the structure of the category should change, if the materiality of individual minerals changes. State budget projections will help inform the Commission’s judgment in determining whether the change in royalties is likely to be sustained until the following review.

Table 11 Western Australian nickel and lithium royalties, 2017-18 to 2022-23

	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
	\$m	\$m	\$m	\$m	\$m	\$m
Nickel	64	65	77	79	81	88
Lithium	94	94	157	192	198	202

Source: Royalty data were obtained from *Western Australia, State Budget 2019-20, Budget Paper No 3, Economic and Fiscal Outlook*, page 85.

Choice of capacity measure

- 38 The Commission intends to use value of production as its capacity measure for the mining category, measured on a free on board (FOB) basis.
- 39 Few States commented on this approach. Victoria and Tasmania supported using value of production, although Tasmania said it should be adjusted. Western Australia also believed adjustments should be made. Queensland was concerned about the basis of valuation.
- 40 Western Australia said adjustments were required because of differences in development and compliance efforts. For a discussion of these issues, see the policy neutrality discussion in Chapter 2 — Measuring relative fiscal capacity.
- 41 Western Australia was also concerned that the observed value of production was affected by State policies (such as level and stability of royalty rates, regional development, approval processes etc) and so the data were not fit for purpose. If these policies increased a State’s mining revenue base, the increase was treated as an increase in its assessed revenue capacity, which Western Australia concluded was inconsistent with policy neutrality. It proposed that value of production data be discounted or blended with a policy neutral measure such as land area. The Commission accepts State policies can affect value of production data, but it is not clear that the effects are both differential and material, or that the Commission could reliably identify and remove them.
- 42 The Commission does not intend to adjust value of production data for differences in development effort, compliance effort or policy effects.
- 43 Tasmania said value of production did not capture differences in extraction costs or profitability. It was concerned it did not reflect the higher cost and lower profitability of Tasmanian mines. Based on the value of production measure, its assessed revenue was twice its actual revenue. It suggested the Commission reintroduce State specific

adjustments for mine profitability, which had been assessed in the 2004 Review for New South Wales and Tasmania for some minerals. In that review, the Commission accepted the lower profitability of mining in those States meant they were unable to apply average royalty rates.

- 44 Those discounts were discontinued in the 2006 Update, when the Commission concluded increases in prices and profitability meant the two States had reacquired the capacity to apply average royalty rates. There would be practical difficulties reintroducing a profitability adjustment. The data on which an adjustment could be based (mining gross operating surplus) indicates the profitability of Tasmania's mining operations does not appear very different from other States in recent years.⁹ For a State specific discount to be material, it would need to be 30% and apply to all Tasmanian value of production. Given that the profitability of Tasmania's mining operations does not appear to be very different to other States, a discount at such a level does not appear to be justified. In addition, an adjustment would not be consistent with the intent conveyed in the Treasurer's letter that the mining assessment method not be changed.
- 45 The Commission does not intend to adjust value of production data for differences in mine profitability.
- 46 While the majority of minerals are valued on value of production, the point at which production is valued for royalty purposes can vary. For the two major minerals (coal and iron ore), royalties are calculated on an FOB or sale price basis. To ensure value of production data are comparable across States, the Commission collects data on an FOB basis for all minerals. Queensland noted an FOB valuation may result in a more policy neutral assessment because of differences in State policies on deductions. However, it was concerned some States may have difficulties providing comparable data on an FOB basis.
- 47 When States provide value of production data, they are asked to tell the Commission if they are unable to provide the data on an FOB basis.

Assessing mining revenue capacity

- 48 The Commission considered whether to assess mining revenue capacity using a mineral by mineral approach, or whether to adopt an approach that grouped certain minerals together.¹⁰ The Commission had previously expressed concern about the policy neutrality of a mineral by mineral assessment in situations where one State

⁹ Tasmania's share of the ABS' mining gross operating surplus is higher than its share of value of production.

¹⁰ Commonwealth Grants Commission, Staff discussion paper, CGC 2018-07-S, *Improving the policy neutrality of the Mining revenue assessment*, November 2018.

dominates production.¹¹ Grouping minerals would improve policy neutrality by reducing the influence of a dominant producer.

- 49 In its report on Horizontal Fiscal Equalisation¹², the Productivity Commission reiterated the Commission’s policy neutrality concerns with the mineral by mineral assessment and it raised a second concern. Its concerns were as follows.
- Policy neutrality — the approach of calculating an average rate of tax was inconsistent with policy neutrality when there was a dominant producer.
 - Adverse incentive effects — there was no incentive for States to encourage increased production or raise royalty rates because much of the additional revenue would be equalised away. Western Australia refers to this issue as the assessment’s **sensitivity** to royalty rate changes.
- 50 In recent reviews, the biggest concern in developing a mining assessment has been finding an appropriate balance between what States do and policy neutrality. If policy neutrality was not an issue, a mineral by mineral assessment would reflect what States do and accurately capture differences in States’ mining revenue capacities. If policy neutrality was the sole issue, then aggregating minerals together would address those concerns.
- 51 Most States agreed with assessing capacity using a mineral by mineral approach. New South Wales, Queensland and Western Australia did not.
- 52 Supporting States said the Commission’s primary task was to measure revenue capacity. They viewed the supporting principles as subsidiary to that task. They preferred greater weight to be given to what States do as they believed this provided a more accurate reflection of State revenue capacities.
- 53 The other three States preferred giving greater weight to policy neutrality, although they favoured different approaches for achieving this. New South Wales and Queensland favoured aggregating minerals together as a way of addressing policy neutrality concerns. Queensland said an aggregated assessment provided a better equalisation outcome in the long run and it achieved a better balance between what States do and policy neutrality.
- 54 Western Australia said the main shortcoming of the mining assessment was its **sensitivity** to royalty rate changes. It contrasted the high sensitivity of individual minerals (in excess of 40%) with the low sensitivity of taxes (less than 10%).¹³

¹¹ For a fuller discussion of this issue see the policy neutrality discussion in Chapter 2 — Measuring relative fiscal capacity.

¹² Productivity Commission 2018, *Horizontal Fiscal Equalisation*, Report no. 88, Canberra.

¹³ Western Australia said its gold assessment had a sensitivity of 60%. It believe that sensitivity was one of the reasons it had been unable to gain Parliamentary approval to increase gold royalty rates.

Western Australia also said there was no ‘true’ measure of mining revenue capacity¹⁴ and so the choice facing the Commission was between alternatives with different imperfections. It proposed four alternative assessments that reduced the sensitivity of the mining assessment:

- a global revenue assessment that aggregated tax and mining revenue bases
- a uniform fixed standard royalty rate (5% or 6%) that applied to all minerals
- a policy neutral capacity measure, such as land area
- a rotating standard applied to all onshore minerals.

55 Revenue equalisation is about capturing differences in State revenue capacities.¹⁵ Those differences arise from States’ differing shares of national tax bases. The extreme sensitivities of individual minerals are caused by extreme distributions of the national tax base for those minerals. Western Australia’s alternative approaches reduce the sensitivity of the mining assessment by diluting the Commission’s assessment of State revenue capacities. A global revenue assessment dilutes mining capacities by blending them with lower tax capacities. A discounting or uniform fixed standard royalty rate approach dilutes mining capacities by leaving a portion of mining revenue unequalled. A land area approach dilutes mining capacities by replacing them with States’ shares of land area. By diluting State revenue capacities, Western Australia’s alternative approaches represent a different form of revenue equalisation.

56 Adopting one of Western Australia’s alternative approaches would mean applying one form of revenue equalisation when States’ shares of national tax bases are more equal (taxes) and a different form when they are more unequal (mining). The Commission is not attracted to such an approach.

Improving the policy neutrality of the mining assessment

57 The Commission considered two adjustments to improve the policy neutrality of the mineral by mineral assessment.

- **A dominant State adjustment.** This adjustment would assess EPC 50% of any change in revenue from a discretionary royalty rate change by a dominant State.¹⁶

¹⁴ Western Australia said there was no true measure of mining revenue capacity because it was not possible to know the level of mineral production States would adopt under average policy and because the concept of average revenue raising effort was unclear when one State dominated production.

¹⁵ The Productivity Commission stated that ‘Mining revenue, in particular, is a prime example of a source-based advantage — one a State benefits from by virtue of where its borders happen to be drawn — and should prima facie be included in the equalisation process’. *op. cit.*, page 22.

¹⁶ The Commission defined a dominant State as being one where the difference between its share of the value of production of a mineral and its population share was more than 50 percentage points. Using

- **A banned minerals adjustment.** This adjustment would assess EPC any revenue raised by a State or States, where in similar circumstances other States banned the mining of that same mineral.
- 58 Some States were unclear how the Commission would implement the adjustment. For example, Western Australia queried whether the 50% limit would apply to royalty rate reductions.
- 59 Only the ACT and the Northern Territory supported introducing the dominant State adjustment.
- 60 New South Wales and Tasmania believed the adjustment was inconsistent with capturing State revenue capacities. New South Wales thought it too blunt an instrument to address policy neutrality concerns. South Australia viewed the 50% figure as an arbitrary discount. Tasmania said the adjustment would not be needed if the Government changed the form of equalisation. Western Australia said the introduction of a limit discriminated against States that previously raised royalty rates (that is, it created intertemporal inequity). It also suggested a 50% limit still left mining with substantially greater sensitivities than taxes.
- 61 Most States supported in part introducing a banned minerals adjustment; Victoria did not.
- 62 While Queensland and South Australia currently have no restrictions on onshore oil and gas exploration and development, New South Wales, Victoria, Western Australia, Tasmania and the Northern Territory at present either ban coal seam gas exploration and/or development, in some or all areas, or have a moratorium on fracking.
- 63 New South Wales said the banned minerals adjustment should only be introduced once it became material. Queensland said States that allowed the extraction of a banned mineral were undertaking extra effort to raise revenue. Just as the Commission assessed additional revenue from above average tax rates EPC, it should assess additional revenue from banned minerals EPC. Western Australia said adjusting for mining bans but not other policy impacts was selective and could create intertemporal inequity. For example, if all States overturned their bans and extracted coal seam gas, their production would be differentially assessed whereas that portion of Queensland's endowments already mined would have been assessed EPC. It said a better solution was a general discount on the mining assessment. The Northern Territory said the Commission should maintain a watching brief on the production levels for banned minerals.
- 64 Victoria favoured retaining the existing approach of assessing States that banned minerals with a zero capacity.

this definition the only dominant State was Western Australia, in respect of iron ore, gold, lithium and nickel.

- 65 The Commission has not been able to have sufficient confidence that in the case of banned minerals, for example coal seam gas, States are treating deposits in like circumstances in different ways. Therefore, it does not consider that there is a sufficient basis to justify the introduction of a banned minerals adjustment in this review. It also notes that doing so would not be consistent with the intent conveyed in the Treasurer’s letter that the mining assessment method not be changed.
- 66 The Commission considers the mineral by mineral approach best captures States’ mining revenue capacities, even though it can give rise to policy neutrality concerns when there is a dominant producer. Currently, policy neutrality concerns arise in relation to one State – Western Australia; they do not arise for other States.
- 67 The Commission intended to further explore its proposed policy neutral adjustments. However, the new equalisation arrangements enacted in the *Treasury Laws Amendment (Making Sure Every State and Territory Gets Their Fair Share of GST) Act 2018* obviate the need for further consideration of this issue as they substantively insulate Western Australia from any distributional effects of these policy neutrality concerns. Therefore, the Commission intends to continue the 2015 Review approach of assessing revenue capacity using a mineral by mineral approach. It also notes that doing so is consistent with the intent conveyed in the Treasurer’s letter that the mining assessment method not be changed.

OTHER ISSUES CONSIDERED BY THE COMMISSION

- 68 There were a number of other issues considered by the Commission, largely in response to concerns raised by States. These issues related to the method for measuring existing disabilities or requests for new disabilities that were not included in the 2015 Review assessment. The main reasons for not assessing certain disabilities identified by States are:
- the conceptual case for a disability has not been established
 - an assessment would not be material, that is, redistribute more than \$35 per capita for any State¹⁷
 - data are not available to make a reliable assessment.

The symmetry of the mining assessment

- 69 Queensland raised the issue of the transition to a mineral by mineral assessment in the 2015 Review. It said the timing of the transition distorted States’ relative revenue

¹⁷ The Commission has set a materiality threshold for including a disability. The materiality test applies to the total impact the disability has on the redistribution across all revenue or expense categories in which it is assessed. To be included, a disability assessment must redistribute more than \$35 per capita away from an equal per capita assessment for any State.

capacities because of a lack of symmetry (Western Australia referred to this as intertemporal inequity). Some States received more GST during the upturn of the mining cycle under the 2010 Review's two tier assessment than they lost during the downturn of the mining cycle under the 2015 Review's mineral by mineral assessment.

- 70 Symmetry effects can arise in a review whenever the Commission changes an assessment method. As part of its consideration of method changes, the Commission takes into account symmetry effects. However, the Commission's view is that it is not prevented from changing an assessment method because the change will give rise to symmetry effects.
- 71 As the Commission is not changing the mineral by mineral assessment method, the mining assessment will not create additional symmetry effects in the 2020 Review.

Should the mining assessment be discounted?

- 72 Queensland and Western Australia proposed discounting the mining assessment.
- 73 Queensland said a discount was necessary because the mining assessment was unable to accurately determine average policy. It said regardless of the approach adopted, an assessment would not reflect well what States do on average. Queensland's view is that this is largely due to what it considers to be significant differences in mining policies between States. A discount would also dampen the effect of tax rate variability on fiscal capacities and lead to more stable outcomes. Western Australia said a discount was justified because of the sensitivity of the assessment to royalty rate changes, differences in State development and compliance efforts, the policy non-neutrality of value of production data and because it was a better way of dealing with policy neutrality concerns than selective adjustments (such as assessing EPC royalties from banned minerals).
- 74 New South Wales and the Northern Territory said discounting meant State revenue capacities were not captured. Victoria said a discount was not justified as it reduced transparency, equity and efficiency.
- 75 The Commission considers that while a discount would differentiate between States with above and below average revenue capacity, it would not differentiate between States with above and below average effort. Therefore, the Commission does not intend to discount the mining assessment.¹⁸ The Commission also notes that a discount would not be consistent with the intent conveyed in the Treasurer's letter that the mining assessment method not be changed.

¹⁸ The Productivity Commission did not support the application of discounts to the mining assessment. It said '...a discount does not sit well with the main fiscal equality objective of HFE ... [and] ... provides a less than robust solution.' op. cit., page 22.

Treatment of payments in relation to the NWS project

- 76 Western Australia again said the Commission had never taken into account its contribution to the NWS project. Western Australia said its contribution exceeded \$8 billion and included losses on its 20 year ‘take or pay’ contracts with the Joint Venturers and its construction of the Dampier to Bunbury pipeline. It suggested the Commission heavily discount or exclude part of the revenues it receives from the Commonwealth from the remaining production.
- 77 This issue also arises in relation to mining-related projects other than the NWS. The Commission observes that other States have provided substantial support for different mining-related projects (such as subsidies for the aluminium sector).
- 78 The Commission addressed this issue in its principles paper. It said:
- In the absence of evidence that certain States have invested more, or invested more effectively, in the development of their State’s economic base (leading directly to enhanced State revenue bases), the Commission cannot separately identify revenue raised due to the effects of above average effort on the revenue base.¹⁹
- 79 The Commission said it was not able to determine how much of the revenue from the NWS could be attributed to Western Australia’s efforts, nor how much of Western Australia’s efforts were above the average effort. In addition, it did not consider discounting was an appropriate way of dealing with differences in development policies. Discounting implied States with above average revenue capacity per capita were in this position because of greater, or more effective, historical development policies and vice versa. Therefore, the Commission does not intend to discount the payment to Western Australia in relation to the NWS project.
- 80 Western Australia first raised this issue in the 1988 Review. In its report, the then Commission said including all of the NWS revenue was consistent with the application of the equalisation principle. It noted that ‘despite the repeated requests of the Government of Western Australia, the terms of reference ... contained no direction that the various elements of these arrangements should be excluded’.²⁰ Western Australia has proposed the exclusion of part of its NWS revenues in every subsequent review. However, in no review has the Commission received terms of reference instructing it to exclude the revenue. In the absence of specific instructions, the equalisation principle requires their inclusion. The Commission also notes a discount would not be consistent with the intent conveyed in the Treasurer’s letter that the 2015 Review mining assessment methodology not be changed.

¹⁹ Commonwealth Grants Commission, Commission Position Paper CGC 2017-21, *2020 Review, The principle of HFE and its implementation*, September 2017, page 20.

²⁰ Commonwealth Grants Commission, *Report on General Revenue Grant Relativities 1988*, Volume 1 — Main Report, pages 6 and 7.

81 The Commission intends to continue to treat the payment to Western Australia in relation to the NWS project in the same way that it treats other Commonwealth payments that affect State fiscal capacities.

Treatment of differences between GFS royalty revenue and State royalty revenue

82 The Commission uses GFS data as the source of financial data for each category (including Mining revenue). The Commission also collects royalty data by mineral from States. If the two totals do not match, the Commission absorbs the difference into the other minerals component. Similar differences arise in relation to GFS revenue and State revenue data for Land tax and Stamp duty on conveyances.

83 Western Australia said any additional revenue allocated to the other minerals component could have disproportionate effects on States with high shares of the other minerals production. It said the Commission should put more onus on States to reconcile their mining data returns with their GFS revenues.

84 The Commission agrees with Western Australia and will continue to work with States to ensure the data they provide is as accurate as possible and reconciles with GFS.

REDISTRIBUTION FROM AN EPC ASSESSMENT

85 Table 12 shows the extent to which the assessment for this category differs from an EPC assessment of Mining revenue. States with a positive redistribution are assessed to have below average revenue raising capacity and States with a negative redistribution are assessed to have above average revenue raising capacity. In per capita terms, Victoria, Western Australia and the ACT experience the largest redistributions.

Table 12 **Redistribution from an EPC assessment, Mining revenue, 2017-18**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	1 833	2 862	-1 616	-3 954	567	184	201	-77	5 647
\$ per capita	231	448	-325	-1 530	328	351	482	-313	228

Note: The redistribution is the difference from an EPC assessment of category revenue.

Source: Commission calculation.

86 The main reasons for the redistribution are the differences between States in the per capita level of their mining activity and their share of the value of production of minerals attracting higher royalty rates.

87 The main reasons for the redistributions for each State are:

- New South Wales has above average activity in coal but below average activity in all other minerals

- Queensland and Western Australia have per capita levels of mining activity that exceed the average and with proportionally more of the minerals attracting higher royalty rates
- Victoria, South Australia and Tasmania have per capita levels of mining activity that are less than the average and with proportionally more of the minerals attracting lower royalty rates
- the ACT has no mining activity
- the Northern Territory has per capita levels of mining activity that exceed the average, but with proportionally more of the minerals attracting lower royalty rates.

88 Table 13 provides a summary of the main disabilities contributing to the redistribution from an EPC assessment for this category.

Table 13 Major reasons for the redistribution, Mining revenue, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Iron ore	1 428	1 152	895	-3 936	274	67	75	44	3 936
Coal	-58	1 269	-2 410	549	386	115	93	55	2 467
Gold	92	102	66	-275	18	8	8	-18	293
Copper	31	73	-21	-24	-69	3	5	3	114
Other minerals	339	266	-145	-268	-42	-9	20	-161	626
Total	1 833	2 862	-1 616	-3 954	567	184	201	-77	5 647

Note: The redistributions from an EPC assessment are illustrative. Disabilities may not add due to rounding.

(a) For confidentiality reasons the Commission is unable to publish data on its bauxite and onshore oil and gas assessments. The assessment shown here is an aggregation of the bauxite, onshore oil and gas and other minerals assessments.

Source: Commission calculation.

UPDATING THE ASSESSMENT

89 As required by the terms of reference, the Commission will incorporate the latest available data in the assessment during the annual updates. This will allow the assessment to reflect changes in State circumstances. States' SRO data on revenue and value of production by mineral will be updated annually.

OUTSTANDING ISSUES

90 From the Commission's perspective, there is one outstanding issue for this assessment – the treatment of non-royalty mining revenue. The Commission is seeking State comments on how these revenues should be treated in the

2020 Review. It is also seeking information from States on the scope of such arrangements and the revenues involved.

- 91 As part of its 2020 Review data collection process, the Commission will collect data on lithium royalties and value of production, allowing it to consider whether these royalties should be separately assessed if it becomes material to do so.

FURTHER CONSULTATION

- 92 Before the release of the final report by 28 February 2020, there will be opportunities for consultation on this assessment. For further information about this category, please contact Dermot Doherty at Dermot.Doherty@cgc.gov.au.

ATTACHMENT 9

OTHER REVENUE

Summary of proposed changes to the 2015 Review methodology

- There are no changes to the assessment approach. Revenues in this category are assessed equal per capita.
- There are minor changes to the composition of the category.

REVENUE OVERVIEW

- 1 The category comprises revenues for which disabilities are not assessed. This treatment is appropriate if:
 - States are assessed to have the same per capita capacity to raise revenue (interest income and dividend income are examples)¹
 - either an assessment method or sufficiently reliable data are not available to support an assessment (gambling taxes are an example)
 - a differential assessment would not be material (assets acquired below fair value are an example).
- 2 States raised \$47.4 billion in other revenues in 2017-18, representing 37.6% of total own-source revenue (see Table 1).

Table 1 Other revenue by State, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ave
Total revenue (\$m)	15 503	9 730	10 775	5 350	3 062	856	1 573	575	47 424
Total revenue (\$pc)	1 957	1 524	2 171	2 071	1 772	1 630	3 780	2 330	1 915
Proportion of total own-source revenue (%)	36.6	34.6	42.1	30.4	46.1	46.3	60.7	39.9	37.6

Source: Commission calculation using State budget data.

¹ The Commission assesses States to have the same per capita capacity to raise interest income and dividend income as part of its Net borrowing assessment. As part of that assessment, States are assessed to have equal net financial worth per capita at the beginning of each assessment year.

- 3 The different State proportions of Other revenue in Table 1 reflect differences in the own-source revenue structure of each State’s budget. The lower proportions for New South Wales, Victoria and Western Australia reflect their relatively higher property revenues (in the case of the first two) and relatively higher mining revenues (in the case of the third). Lower relative property revenues contribute to Queensland and the Northern Territory’s higher proportions. South Australia and Tasmania have higher proportions because they tend to have relatively weaker tax bases. The high proportion for the ACT is because ABS Government Finance Statistics (GFS) includes its municipal rates as part of other revenue.
- 4 Table 2 shows Other revenue as a share of total own-source revenue from 2014-15 to 2017-18.

Table 2 Other revenue, 2014-15 to 2017-18

	2014-15	2015-16	2016-17	2017-18
Total revenue (\$m)	44 195	45 071	44 171	47 424
Proportion of total own-source revenue (%)	40.2	39.5	36.9	37.6

Source: Commission calculation using GFS and State budget data.

CATEGORY STRUCTURE

- 5 All revenue in this category is assessed equal per capita (EPC). The category has no components. Table 3 shows the revenues included in the category, as classified in ABS GFS data. These data are not yet available for 2017-18.

Table 3 **Composition of the Other revenue category, 2014-15 to 2016-17**

	2014-15	2015-16	2016-17
	\$m	\$m	\$m
User charges (a)	5 257	5 532	5 337
Municipal rates (b)	376	424	452
Gambling taxes	5 753	6 052	5 979
Other taxes (c)	7 650	8 469	8 397
Interest income	4 373	4 556	4 323
Dividend income	10 640	9 048	8 641
Grants (d)	63	56	45
Other income	10 079	10 934	10 997
Total	44 191	45 071	44 171

(a) Table 7 shows around \$23 billion of user charges are differentially assessed and offset against the relevant expense category. The user charges shown in the table are those assessed EPC.

(b) The ACT does not have a local government sector. GFS includes its local government-type revenue (municipal rates) with its State-type revenue.

(c) Other taxes include revenues relocated from revenue categories to Other revenue. They include other land based taxes and conveyance transfers assessed equal per capita.

(d) These are grants from parties other than the Commonwealth.

Source: Commission calculation using GFS data.

6 Table 4 shows the capacity measure (revenue disabilities) that apply to the Other revenue assessment.

Table 4 **Category structure, Other revenue, 2017-18**

Component	Component revenue	Capacity measure (revenue disability)	Influence measured
	\$m		
Other revenue	47 424	Not applicable	These revenues are not differentially assessed.

Source: Commission calculation using State budget data.

Category and component revenue

7 The main data sources for calculating category and component revenue are GFS and State budget data.²

² Unless otherwise stated, category and component revenue for the first two assessment years are sourced from GFS. States provide data for the most recent assessment year because GFS data are not available.

ASSESSMENT APPROACH

8 This is a residual category, comprising State revenues not assessed in one of the other revenue categories. Table 3 showed the scope of revenues included in this category.

Capacity measure (revenue disability)

9 No capacity measure is identified in this category. An EPC assessment does not give rise to a redistribution and so it does not change States' relative fiscal capacities.

Data and method

10 The Commission obtains the number of people from the ABS' estimated resident population.

CATEGORY CALCULATIONS

11 Table 5 shows the derivation of the assessed revenue for each State.

Table 5 Illustrative assessment, Other revenue, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ave
Actual revenue (\$m)	15 503	9 730	10 775	5 350	3 062	856	1 573	575	47 424
Population ('000)	7 921	6 386	4 964	2 584	1 728	525	416	247	24 770
Assessed revenue (\$m)	15 166	12 226	9 503	4 946	3 309	1 005	797	472	47 424
Assessed revenue (\$pc)	1 915	1 915	1 915	1 915	1 915	1 915	1 915	1 915	1 915

Note: A State's assessed revenue equals total actual revenue multiplied by that State's share of population.

Source: Commission calculation.

ASSESSMENT ISSUES

12 The 2015 Review assessments provided the starting point for the 2020 Review. In April 2018, Commission staff released a draft assessment paper setting out staff proposals for the Other revenue category. States provided submissions on the proposals. The staff proposals and State submissions are available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

13 The main assessment issues for the category were:

- the treatment of gambling taxes
- the treatment of user charges
- the classification of revenues as taxes or user charges.

- 14 Generally, States supported investigating each assessment issue.
- 15 The following sections present the draft methodology for the Other revenue category and address issues raised in State submissions.³

The treatment of gambling taxes

- 16 Table 6 shows GFS data on State gambling taxes between 2014-15 and 2016-17.

Table 6 Gambling taxes, 2014-15 to 2016-17

	2014-15	2015-16	2016-17
	\$m	\$m	\$m
Lotteries	1 269	1 368	1 293
Poker machines	3 480	3 683	3 715
Casino taxes	665	696	697
Race and sports betting	291	256	224
Other	48	49	50
Total	5 753	6 052	5 979

Source: GFS data.

- 17 During the review, the Commission investigated approaches for differentially assessing gambling taxes, including:
 - simple measures, such as broad population groups
 - the socio-demographic characteristics of gamblers, such as those obtained from the Household, Income and Labour Dynamics in Australia (HILDA) Survey datasets⁴
 - broad activity based measures, such as gambling expenditure, gambling turnover and gambling revenue
 - broad revenue aggregates, such as Gross Household Disposable Income.
- 18 None of the measures proved satisfactory. The problem of the pervasiveness of State policies, which materially affected the level of gambling activity in each jurisdiction, proved insurmountable. The weighted socio-demographic models using gender, age and education level produced differential assessments that were not material. In addition, socio-demographic approaches do not address the advent of online gambling, where taxation in one State might relate to the activities of residents from another State, or from overseas.

³ State submissions often include significant detail and supporting evidence. In this attachment, we respond to the arguments and evidence States presented in their submissions. For the full detail of State submissions, see the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

⁴ The ACT also proposed a method using HILDA data.

- 19 Most States favoured an EPC assessment of gambling. South Australia and the ACT did not. They said a differential assessment of gambling could be developed.
- 20 However, the Commission was unable to isolate the underlying factors driving gambling activity in each State and, therefore, was unable to develop a reliable method of differentially assessing gambling taxes.
- 21 Given it has been unable to identify the underlying factors that drive gambling expenditure, combined with the problems posed by State policy influence, the Commission intends to continue to assess gambling taxes EPC in the Other revenue category.

The treatment of user charges

- 22 The Commission has three assessment approaches to user charges:
- it nets the user charges from category expenses when:
 - it considers the drivers of the user charges are the same as the drivers of the related expenses — this is the approach used for transport services
 - it has data on the drivers of the net cost of services — this is the approach used for Schools.
 - it subtracts an assessment of the user charges from the assessed expenses when:
 - it considers the drivers of the user charges are different from the drivers of the related expenses, they can be reliably measured and their assessment would be material — this is the approach used for Housing services.
 - it assesses the remaining user charges EPC.
- 23 Table 7 shows that around four fifths of user charges were differentially assessed, with the remainder assessed EPC in this category.

Table 7 **Composition of user charges, 2014-15 to 2016-17**

	2014-15	2015-16	2016-17
	\$m	\$m	\$m
User charges differentially assessed	21 315	22 683	23 280
User charges assessed EPC	5 257	5 532	5 337
Total	26 572	28 215	28 617

Source: Commission calculation using GFS data.

- 24 Most States supported the proposal to retain the three assessment approaches to user charges. However, the ACT said all user charges should be presented on the expense side of the budget. It was concerned that presenting them in the Other revenue category detracted from the transparency and clarity of the assessments.

- 25 The ACT's proposal would require the introduction of either:
- new user charge assessments in a range of expense assessments — this was the 1999 Review approach
 - a new expense category, comprising user charges assessed EPC — this was the 2004 Review approach.
- 26 In the 2004 Review the Commission decided it was not necessary to add greater detail to a range of expense assessments by adding an EPC user charge assessment to them. It gathered these EPC user charges together and presented them in a single EPC user charge category. In the 2010 Review, the Commission decided it was not necessary to have two EPC assessments (one user charge and one revenue) and it decided to present the user charges assessed EPC in the Other revenue category.
- 27 The Commission intends to retain its three assessment approaches to user charges and to continue to present EPC user charges in the Other revenue category.

The classification of a revenue as a tax or a user charge

- 28 The Other revenue category includes user charges assessed EPC. The classification of a revenue as a tax or user charge is important. If a revenue is classified as a tax, it is differentially assessed in one of the Commission's six revenue categories or, if an assessment is not material, EPC in the Other revenue category. If a revenue is classified as a user charge, it is offset against the relevant expense assessment or assessed EPC in the Other revenue category.
- 29 Most States agreed in principle with the proposal to adopt the ABS' definitions of taxes and user charges, but some disagreed with the ABS' classification of specific revenues. New South Wales and Victoria disagreed with the ABS' classification of Fire and Emergency Services Levies (FESLs) as taxes. They said FESLs were more like user charges. States set their level of FESLs to cover a portion of their cost of emergency services and they believed the driver of FESLs was the cost of emergency services, not differences in States' taxable capacities.
- 30 The Commission intends to use the ABS' definitions and classification of revenues as input into its considerations. However, the main consideration will continue to be: from an equalisation perspective, what are the drivers of the revenue stream. If the Commission concludes an ABS classification of a particular revenue stream is not appropriate for equalisation purposes, it will apply its own classification.
- 31 In the case of FESLs, the Commission agrees with the view of New South Wales and Victoria. It intends to treat FESLs as user charges because it considers the driver of FESLs is States' costs of emergency services, not differences in their taxable capacities. As the driver of FESLs is the driver of emergency services expense, the Commission intends to offset them against emergency services expenses, which are assessed in the service expenses component of Other expenses.

OTHER ISSUES CONSIDERED BY THE COMMISSION

- 32 There were a number of other issues considered by the Commission, largely in response to concerns raised by States. These issues related to the method for measuring existing disabilities or requests for new disabilities that were not included in the 2015 Review assessment. The main reasons for not assessing certain disabilities identified by States are:
- the conceptual case for a disability has not been established
 - an assessment would not be material, that is, redistribute more than \$35 per capita for any State⁵
 - data are not available to make a reliable assessment.

Is a differential assessment of Other revenue warranted?

- 33 All States supported having a residual revenue category assessed EPC. They agreed the revenues included in the category should be those where States are assessed to have the same per capita capacity, where the method or data are not sufficiently reliable to support an assessment or where a differential assessment would not be material.
- 34 Western Australia went further saying the Other revenue category should not be assessed using a broad indicator. It was concerned a broad indicator would double count revenue capacity. For example, any broad indicator is likely to be boosted by Western Australia's high mining capacity, which is already assessed in the Mining revenue category.
- 35 Western Australia also said a differential assessment would not be appropriate for:
- revenue derived from financial asset holdings (such as interest, dividends and contributions from trading enterprises) because the Net borrowing assessment aims to give States the capacity to hold an EPC value of net financial assets
 - user charges and fees and fines because these revenues depend on the propensity of people to use the relevant service or breach laws, which is unrelated to the population's capacity to pay.
- 36 The Commission does not intend to develop broad revenue and expense assessments and, therefore, it does not intend to apply a differential assessment to the Other revenue category.

⁵ The Commission has set a materiality threshold for including a disability. The materiality test applies to the total impact the disability has on the redistribution across all revenue or expense categories in which it is assessed. To be included, a disability must redistribute more than \$35 per capita away from an EPC assessment for any State.

REDISTRIBUTION FROM AN EPC ASSESSMENT

37 As Table 8 shows an EPC assessment means the category does not give rise to a redistribution.

Table 8 **Redistribution from an EPC assessment, Other revenue, 2017-18**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	0	0	0	0	0	0	0	0	0
\$ per capita	0	0	0	0	0	0	0	0	0

Note: The redistribution is the difference from an EPC assessment of category revenue.

Source: Commission calculation.

UPDATING THE ASSESSMENT

38 As required by the terms of reference, the Commission will incorporate the latest available data in the assessment during the annual updates. This will allow the assessment to reflect changes in State circumstances. Population data used in this assessment will be updated annually.

OUTSTANDING ISSUES

39 From the Commission's perspective, there are no outstanding issues for this assessment.

FURTHER CONSULTATION

40 Before the release of the final report by 28 February 2020, there will be opportunities for consultation on this assessment. For further information about this category, please contact Dermot Doherty at Dermot.Doherty@cgc.gov.au.

ATTACHMENT 10

SCHOOLS

Summary of proposed changes to the 2015 Review methodology

- The regression models used to estimate cost weights for Indigenous status, socio-economic status, service delivery scale and remoteness have been respecified.
- The Commonwealth funding of non-government schools component has been removed from the Schools category and is now treated as out of scope. This means that neither these expenses, nor their associated Commonwealth payments, are included in the Commission's assessments.
- The student transport component has been removed from the Schools category, with these expenses now assessed in the Transport category.
- Total actual enrolments are now used. In 2015 Review methods, pre-year 1 student data were imputed from year 1 student data.

- 1 This attachment contains the Commission's draft proposals for the Schools category following consultation with the Commonwealth and States.

SERVICE OVERVIEW

- 2 Table 1 shows that net State expenses on schools were \$39.8 billion in 2017-18, representing 18.4% of total State expenses. State spending on this function comprises expenses for government schools and non-government schools. States, in running schools, also spend money allocated and provided by the Commonwealth. Expenses of running government schools funded by the Commonwealth, through Students First funding and other payments, are included.
- 3 Commonwealth funding of non-government schools through the Students First funding agreement uses States as conduits to transfer this money, but States have no policy control over the allocation of this money, and it does not alleviate the States of their responsibilities. As such, this money is not regarded as part of State expenses on schools.

- 4 In addition to excluding Commonwealth funding of non-government schools, expenses associated with student transport are also excluded. These expenses are grouped with other transport expenses.

Table 1 State expenses on Schools by State, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Total expenses (\$m)	12 747	8 247	8 697	4 953	2 804	983	679	690	39 800
Total expenses (\$pc)	1 609	1 291	1 752	1 917	1 623	1 872	1 632	2 796	1 607
Proportion of operating expenses (%)	19.1	16.4	19.5	19.7	18.3	20.2	16.7	12.8	18.4

Note Expenses shown on a net basis. Expenses do not include expenses for Commonwealth funding of non-government schools and student transport.

Source: Commission calculation using State budget data.

- 5 Table 2 shows the share of State expenses on schools from 2014-15 to 2017-18.

Table 2 State expenses on Schools, 2014-15 to 2017-18

	2014-15	2015-16	2016-17	2017-18
Total expenses (\$m)	34 582	36 500	38 118	39 800
Proportion of total operating expenses (%)	18.6	18.9	18.8	18.4

Note Expenses shown on a net basis.

Source: Commission calculation using ABS Government Finance Statistics (GFS) and State budget data.

- 6 User charges amounted to \$1.7 billion in 2017-18 and mainly reflect voluntary school student fees for government schools. In this category, user charges are deducted from total category expenses so that the assessment only applies to net category expenses.

Table 3 Schools user charges, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Revenue (\$m)	503	357	435	202	190	27	16	9	1 738
Revenue (\$pc)	63	56	88	78	110	51	38	35	70

Note: User charges refer to revenue from the sale of goods and services classified in GFS to economic type framework (ETF) 112. In schools, they are predominantly the voluntary fees paid by families to government schools. These revenues are generally kept by the individual school and not included in consolidated revenue.

Source: Commission calculation using ABS GFS and State budget data.

State roles and responsibilities

- 7 The Schools category includes State recurrent spending on pre-schools, primary schools and secondary schools, in both the government and non-government school sectors.
- 8 All States provide government schools. They also provide the regulatory framework for the operation of non-government schools and financial assistance to them.

Around 66% of students attend government schools. This proportion has risen slightly since 2014, after about 40 years of decline.

- 9 Both State and Commonwealth governments provide funding for government and non-government schools, albeit at different levels. Both sectors receive additional funding from private sources (largely parent contributions), although for government schools these amounts are small.
 - States provide around 80% of government recurrent funding for government schools, and the Commonwealth provides 20%.
 - States fund non-government schools at about 20% of the funding per student that they fund government schools. Of all government funding of non-government schools, 61% comes from the Commonwealth and 39% from States.

Commonwealth roles and responsibilities

- 10 As described above, the Commonwealth makes payments to the States to meet a proportion of the cost of government and non-government schools. The States' expenditure of the payments for government schools are included in the category expenses.
- 11 Payments by the Commonwealth for non-government schools are channelled through the States to non-government schools.¹ The States have no flexibility in how these funds are spent.
- 12 New funding arrangements for schools — the National Education Reform Agreement (NERA) — came into effect in 2014. This involved changes to how the Commonwealth determines funding levels for government and non-government schools. Under these arrangements funding will be based on the Schooling Resource Standard (SRS) which provides a base amount per student and extra loadings for disadvantage such as:
 - students with disabilities
 - low socio-economic background
 - school size
 - remoteness
 - Indigenous students
 - capacity to pay (non-government schools only)
 - lack of English proficiency.

¹ To ensure the payments have no effect on States' fiscal capacities, both the spending of this money, and the payments themselves, are excluded from the Commission's assessments.

- 13 The National School Reform Agreement (NSRA), which will operate from 2019 to 2023, replaced the NERA. The NSRA retains the arrangement that funding is based on the SRS.
- 14 In addition to general revenue assistance, the Commonwealth provides funding to the States for schools, comprising the Quality Schools Funding² payments (NERA/NSRA) and national partnership payments (NPPs). Table 4 shows the main Commonwealth payments to the States for Schools in 2017-18.

Table 4 Commonwealth payments to the States for Schools, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Quality schools funding - Non-government (\$m)	3 462	2 939	2 318	1 136	792	239	210	150	11 246
Quality schools funding - Government (\$m)	2 270	1 618	1 615	660	465	187	96	200	7 111
Universal access to early childhood education (\$m)	126	108	87	47	28	9	8	5	417
National School Chaplaincy Programme (\$m)	11	13	18	8	7	2	1	0	60
Other (\$m)	14	6	7	3	4	0	1	52	87
Total (\$m)	5 883	4 684	4 045	1 854	1 296	438	315	407	18 922
Total (\$pc)	743	733	815	718	750	834	757	1 650	764

Note Table shows major payments only. Commonwealth Own Purpose Expenses (COPEs) are not included. Payments that the Commission treats as 'no impact' are included in the table.

Source: Commonwealth *Final Budget Outcome, 2017-18*.

- 15 The complete list of Commonwealth payments and their treatment is available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).³

CATEGORY STRUCTURE

- 16 The assessment of the Schools category is undertaken in three components:
- State spending on government schools
 - State spending on non-government schools
 - Commonwealth funding of government schools.
- 17 Components allow different disability assessments to apply to sub-functions.
- 18 Table 5 shows the category's assessment structure, the size of each component and the disabilities that apply.

² Previously known as the Student First Funding.

³ Most Commonwealth payments to the States affect the grant distribution but some do not. The Commission refers to payments that affect the grant distribution as 'impact' payments. For more information, see Attachment 2— Commonwealth payments.

Table 5 Category structure, Schools, 2017-18

Component	Component expense	Disability	Influence measured by disability
	\$m		
State spending on government schools	28 720	Socio-demographic composition	Recognises that student numbers, adjusted for Indigenous status, low socio-economic status, and remoteness, affect the use and cost of providing services.
		Service delivery scale	Recognises the diseconomies of smaller schools with increasing remoteness.
		Wage costs	Recognises the differences in wage costs between States.
State spending on non-government schools	3 820	Socio-demographic composition	Recognises that the number of students in non-government schools, adjusted for low socio-economic status and remoteness, affect the use and cost of providing services.
		Wage costs	Recognises the differences in wage costs between States.
Commonwealth funding of government schools	7 260	Socio-demographic composition	Recognises the 2015 Review terms of reference instruction not to unwind the funding allocated for educational disadvantage by the Commonwealth.
		Service delivery scale	Recognises the diseconomies of smaller schools with increasing remoteness.
		Wage costs	Recognises the differences in wage costs between States.

Source: Commission calculation using ABS GFS and State budget data.

Category and component expenses

19 The main data sources for calculating category and component expenses are ABS GFS and State budget data.⁴

ASSESSMENT APPROACH

State spending on government schools

20 Expenses for this component include:

- State spending on government primary and secondary schools and government preschools.

⁴ Unless otherwise stated, category and component expenses for the first two assessment years are sourced from ABS GFS. States provide data for the most recent assessment year because GFS data are not available in time for the annual update.

Socio-demographic composition (SDC)

- 21 Spending by each State on government schools is primarily affected by the size of its government school student population.
- 22 The SDC of the student population also affects State spending, with particular groups attracting higher costs than others.
- 23 Each government school student is given a weight of 1, with additional loadings (or cost weights) provided for:
 - students in outer regional areas — 0.13
 - students in remote or very remote areas — 0.55
 - low SES students — 0.66
 - Indigenous status — 0.54.
- 24 These weights are additive, so a low SES remote Indigenous student will be counted as 1.00 (base count) + 0.55 (remote) + 0.66 (low SES) + 0.54 (Indigenous) equals 2.76 cost weighted students.

Service delivery scale (SDS)

- 25 Smaller schools cost more per student than larger schools, as the fixed cost of operating a school is spread across fewer students. This results in different remoteness regions having cost weights, comparable to, and additive with, those used in the SDC assessment:
 - students in major city schools — 0.05
 - students in inner regional schools — 0.09
 - students in outer regional schools — 0.11
 - students in remote schools — 0.14
 - students in very remote schools — 0.22.

Wage costs

- 26 Differences in wage costs between States have a differential effect on the cost of providing services. There is a general method for measuring the influence of wage costs in components where the disability applies. For a description of the method see Attachment 24— Wages costs.

Data and method

- 27 Regression analysis is used to determine the SDC and SDS cost weights associated with different student attributes. Data from the Australian Curriculum, Assessment and Report Authority (ACARA)⁵ on the profile and funding of individual schools are used for this analysis.
- 28 The SDC cost weights reflect the additional funding States provide to schools based on the Indigenous status and socio-economic status of students and the remoteness of the school. The SDS cost weights reflect that schools in more remote areas tend, on average, to be smaller. It is captured using the average fixed school cost and the average school size in different remoteness areas to derive cost weights for each remoteness area.
- 29 The following data sources are used to obtain annual student numbers by SDC group by State to which the cost weights are applied:
 - ABS data for total students, school sector, and Indigenous status
 - ACARA data for student socio-economic status and remoteness.
- 30 Wage costs factors are then applied to obtain the component assessed expenses.

Component calculations

- 31 Table 6 shows the calculation of the socio-demographic composition and service delivery scale assessments.

⁵ ACARA is an independent statutory authority responsible for developing the national curriculum, developing and administering the National Assessment Program — Literacy and Numeracy (NAPLAN) testing, and reporting on school resourcing, socio-economic profile and performance, in particular collecting and publishing the myschool.edu.au website. The data used in the My school website forms the basis of the analysis used in this assessment.

Table 6 Illustrative assessment, State spending on government schools, calculations, 2017-18

	Cost weight	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	%	'000	'000	'000	'000	'000	'000	'000	'000	'000
Socio-demographic composition										
Students	100	791	605	543	276	173	57	42	30	2 516
Low SES students	66	249	165	165	76	53	24	5	15	751
Indigenous students	54	59	13	54	22	11	6	2	13	180
Major cities students	0	582	468	332	204	119	0	42	0	1 747
Inner regional students	0	160	110	112	29	21	37	0	0	469
Outer regional students	13	46	26	86	23	26	18	0	16	242
Remote students	55	3	1	7	15	5	0	0	5	36
Very remote students	55	1	0	6	5	2	0	0	9	23
Service delivery scale										
Major cities students	5	582	468	332	204	119	0	42	0	1 747
Inner regional students	9	160	110	112	29	21	37	0	0	469
Outer regional students	11	46	26	86	23	26	18	0	16	242
Remote students	14	3	1	7	15	5	0	0	5	36
Very remote students	22	1	0	6	5	2	0	0	9	23
SDC weighted students		996	725	699	353	221	78	46	57	3 176
SDS weighted students		47	35	38	18	11	6	2	5	161
Total weighted students		1 043	760	737	371	232	84	48	62	3 337
		\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
SDC assessed expenses		8 574	6 243	6 019	3 036	1 898	672	397	494	27 332
Service delivery scale		406	299	325	154	99	49	16	40	1 388
Task assessed expenses		8 980	6 542	6 343	3 190	1 997	721	413	534	28 720

Source: Commission calculation.

32 Table 7 shows the calculation of total assessed expenses for the component in 2017-18.

Table 7 Illustrative assessment, State spending on government schools, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SDC Assessed Expenses (\$m)	8 574	6 243	6 019	3 036	1 898	672	397	494	27 332
Service delivery scale (\$m)	406	299	325	154	99	49	16	40	1 388
Wage cost factor	1.007	1.005	0.995	0.992	0.969	0.964	1.060	1.037	1.000
Assessed expenses (\$m)	9 048	6 573	6 314	3 164	1 935	695	438	554	28 720
Assessed expenses (\$pc)	1 142	1 029	1 272	1 225	1 119	1 324	1 052	2 247	1 159

Source: Commission calculation.

State spending on non-government schools

- 33 Expenses for this component include State spending on non-government primary and secondary schools and non-government preschools.

Socio-demographic composition

- 34 State spending on non-government schools is primarily affected by the size of its non-government school student population.
- 35 The Commission has applied a model with similar specifications⁶ as used for State spending on government schools to non-government school data. Based on the model, an additional weight is applied to each student with higher cost attributes.
- 36 Each non-government school student is given a weight of 1, with additional loadings provided for:
- students in outer regional areas — 0.09
 - students in remote or very remote areas — 0.07
 - low SES students — 1.68.

Service delivery scale

- 37 Smaller schools cost more per student than larger schools, as the fixed cost of operating a school is spread across fewer students. This results in different remoteness regions having cost weights, comparable to, and additive with, those used in the SDC assessment:
- students in major city schools — 0.05
 - students in inner regional schools — 0.07
 - students in outer regional schools — 0.10
 - students in remote schools — 0.15
 - students in very remote schools — 0.28.

Wage costs

- 38 Differences in wage costs between States have a differential effect on the cost of providing services. There is a general method for measuring the influence of wage costs in components where the disability applies. For a description of the method see Attachment 24 — Wages costs.

⁶ While the government model includes Indigenous status. This variable is unreliable in a non-government model and so has been excluded.

Data and method

39 Table 8 shows how the cost weights are applied to the number of non-government students with different socio-demographic attributes to calculate the SDC and SDS assessments for State spending on non-government schools.

Table 8 Illustrative assessment, State spending on non-government schools, calculations, 2017-18

	Cost weight	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	%	'000	'000	'000	'000	'000	'000	'000	'000	'000
Socio-demographic composition										
Students	100	417	348	266	137	93	24	27	11	1 324
Low SES students	168	47	40	29	16	12	4	1	3	153
Major cities students	0	324	271	177	114	77	0	27	0	990
Inner regional students	0	79	68	49	10	8	20	0	0	234
Outer regional students	9	14	9	38	9	7	4	0	6	87
Remote students	7	1	0	2	3	1	0	0	3	10
Very remote students	7	0	0	1	0	0	0	0	2	4
Service delivery scale										
Major cities students	5	324	271	177	114	77	0	27	0	990
Inner regional students	7	79	68	49	10	8	20	0	0	234
Outer regional students	10	14	9	38	9	7	4	0	6	87
Remote students	15	1	0	2	3	1	0	0	3	10
Very remote students	28	0	0	1	0	0	0	0	2	4
SDC weighted students		498	416	318	164	114	32	29	17	1 588
SDS weighted students		23	19	16	8	5	2	1	2	76
Total weighted students		521	435	334	172	119	34	31	19	1 664
		\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
SDC assessed expenses		1 143	956	729	377	261	73	67	40	3 646
Service delivery scale		52	43	37	18	12	4	3	4	174
Task assessed expenses		1 195	999	767	395	273	77	71	44	3 820

Source: Commission calculation.

40 Table 9 shows the component build, with wage costs applied to obtain the component assessed expenses.

Table 9 Illustrative assessment, State spending on non-government schools, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SDC Assessed Expenses (\$m)	1 143	959	729	376	260	73	67	41	3 648
Service delivery scale (\$m)	52	43	37	18	12	4	3	4	172
Wage cost factor	1.007	1.005	0.995	0.992	0.969	0.964	1.060	1.037	1.000
Assessed expenses (\$m)	1 204	1 006	762	390	263	74	74	47	3 820
Assessed expenses (\$pc)	152	158	153	151	152	142	179	189	154

Source: Commission calculation.

Commonwealth funding of government schools

Socio-demographic composition

- 41 The Commonwealth provides funding to the States through the Quality Schools funding program (previously known as NERA and as Students First). This funding is based on the Schooling Resource Standard (SRS), which is based on a number of SDC factors.
- 42 In the 2015 Review, the Commission received terms of reference (ToR) directing it not to unwind the measures of educational disadvantage embedded in the NERA payments to States.
- 43 The Commission has retained the 2015 Review approach of a separate assessment of Commonwealth funding of government school expenses. This assessment is based on Commonwealth Department of Education and Training figures on the funding entitlement each State had on the basis of its student profile in each assessment year. All States that responded supported this proposal except New South Wales. New South Wales considered that an equal per capita (EPC) assessment of the expenses funded from this payment would better meet the 2015 ToR. The Commission considers that the debate about how to meet the 2015 ToR requirement was concluded in the 2015 Review and that in the absence of new terms of reference directions or major changes to the payment, the 2015 approach remains appropriate.⁷

Wage costs

- 44 Differences in wage costs between States have a differential effect on the cost of providing services. There is a general method for measuring the influence of wage costs in components where the disability applies. For a description of the method see Attachment 24 — Wages costs.

⁷ The issues are discussed in the Commission's *Report on GST Revenue sharing relativities 2015 Review, Volume 2, Chapter 10 Schools education*.

Data and method

- 45 The expenditure of Commonwealth NERA payments based on the average SRS per student for each State in the assessment years is provided by the Commonwealth Department of Education and Training.
- 46 The average per student SRS amounts in each State is applied to actual enrolled students to calculate the total funding implied by the NERA. This is multiplied by a factor reflecting the percentage of the SRS that is funded by the Commonwealth to calculate the SDC assessed expenses. This is then multiplied by the wages factor to calculate the assessed expenses.
- 47 Table 10 shows the calculation of assessed expenses for the component in 2017-18.

Table 10 Illustrative assessment, Commonwealth funding of government schools, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SRS per student (\$)	16 567	15 995	16 828	17 174	16 322	17 666	14 258	27 173	16 650
Enrolments ('000)	791	605	543	276	173	57	42	30	2 516
Implied required funding (\$m)	13 105	9 678	9 136	4 745	2 816	998	596	825	41 899
SDC assessed expenses (\$m)	2 271	1 677	1 583	822	488	173	103	143	7 260
Wage cost factor	1.007	1.005	0.995	0.992	0.969	0.964	1.060	1.037	1.000
Assessed expenses (\$m)	2 288	1 685	1 575	815	473	167	110	148	7 260
Assessed expenses (\$pc)	289	264	317	316	273	318	263	601	293

Source: Commission calculation.

CATEGORY CALCULATIONS

- 48 Table 11 brings the assessed expenses for each component together to derive the total assessed expenses for each State for the category. It shows, at the component level, how each disability assessment moves expenses away from an EPC distribution to obtain assessed expenses.

Table 11 Illustrative category assessment, Schools, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
State spending on government schools									
EPC	1 159	1 159	1 159	1 159	1 159	1 159	1 159	1 159	1 159
SDC	-21	-126	109	72	-5	177	-151	901	0
Service delivery scale	-5	-9	9	4	1	37	-16	105	0
Wage costs	8	5	-6	-10	-36	-42	69	43	0
Assessed expenses	1 142	1 029	1 272	1 225	1 119	1 324	1 052	2 247	1 159
State spending on non-government schools									
EPC	154	154	154	154	154	154	154	154	154
SDC	-3	3	0	-2	3	-9	14	20	0
Service delivery scale	0	0	1	0	0	1	0	9	0
Wage costs	1	1	-1	-1	-5	-6	9	6	0
Assessed expenses	152	158	153	151	152	142	179	189	154
Commonwealth funding of government schools									
EPC	293	293	293	293	293	293	293	293	293
SDC	-6	-30	26	25	-11	36	-45	286	0
Wage costs	2	1	-1	-2	-9	-11	18	11	0
Assessed expenses	289	264	317	316	273	318	263	601	293
Total assessed expenses	1 583	1 451	1 743	1 691	1 545	1 783	1 493	3 037	1 607

Note: Table may not add due to interactions between disabilities and rounding. The EPC expenses and assessed expenses are total spending per capita. The amounts for each disability are redistributions from an EPC assessment.

Source: Commission calculation.

INFRASTRUCTURE ASSESSMENT

- 49 States require infrastructure to support service delivery. State infrastructure requirements are assessed in the Investment category. The main driver of investment in schools is growth in the number of cost weighted students in government schools. The cost weight relates to Indigenous students in schools with more than 25% Indigenous enrolments, and is calculated based on the recurrent government school cost weights. While other disabilities affect the recurrent costs of providing schooling, they do not typically require additional capital.
- 50 Interstate differences in construction costs are also recognised.
- 51 For a description of the Investment assessment, see Attachment 21 — Investment.

ASSESSMENT ISSUES

- 52 The 2015 Review assessments provided the starting point for the 2020 methodology Review. In April 2018, Commission staff released a draft assessment paper setting out staff proposals for the Schools category. States provided submissions on the proposals. The staff proposals and State submissions are available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).
- 53 The main assessment issues for the category were:
- redeveloping the regression model used to calculate cost weights for different groups of students
 - whether the treatment of student transport expenses should be differentially assessed within the schools category
 - whether Commonwealth funding of non-government school expenses should be considered out of scope, along with the associated Commonwealth payment.
- 54 States broadly supported the redevelopment of the regression and the exclusion of Commonwealth funding of non-government schools. However, many States did not support the proposed treatment of the student transport component.
- 55 The following sections discuss the main issues for the category, including State views.⁸

Redeveloped regression model

- 56 A new regression model has been developed to explain the costs of different groups of students using data sourced from the ACARA. This replaces the model used in the 2015 Review.
- 57 The regression models a national average funding formula from which SDC and SDS cost weights can be derived. The results of this regression and the implied SDC cost weights are shown in Table 12.

⁸ State submissions often include significant detail and supporting evidence. In this attachment, we respond to the arguments and evidence States presented in their submissions. For the full detail of State submissions, see the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

Table 12 State spending on government schools model, 2016

	Value estimated by regression	Cost weight
	\$	%
Base student cost	7 639	100.0
Additional cost for		
Outer regional student	958	12.5
Remote or very remote student	4 238	55.5
Low SES student	5 073	66.4
Indigenous student	4 126	54.0

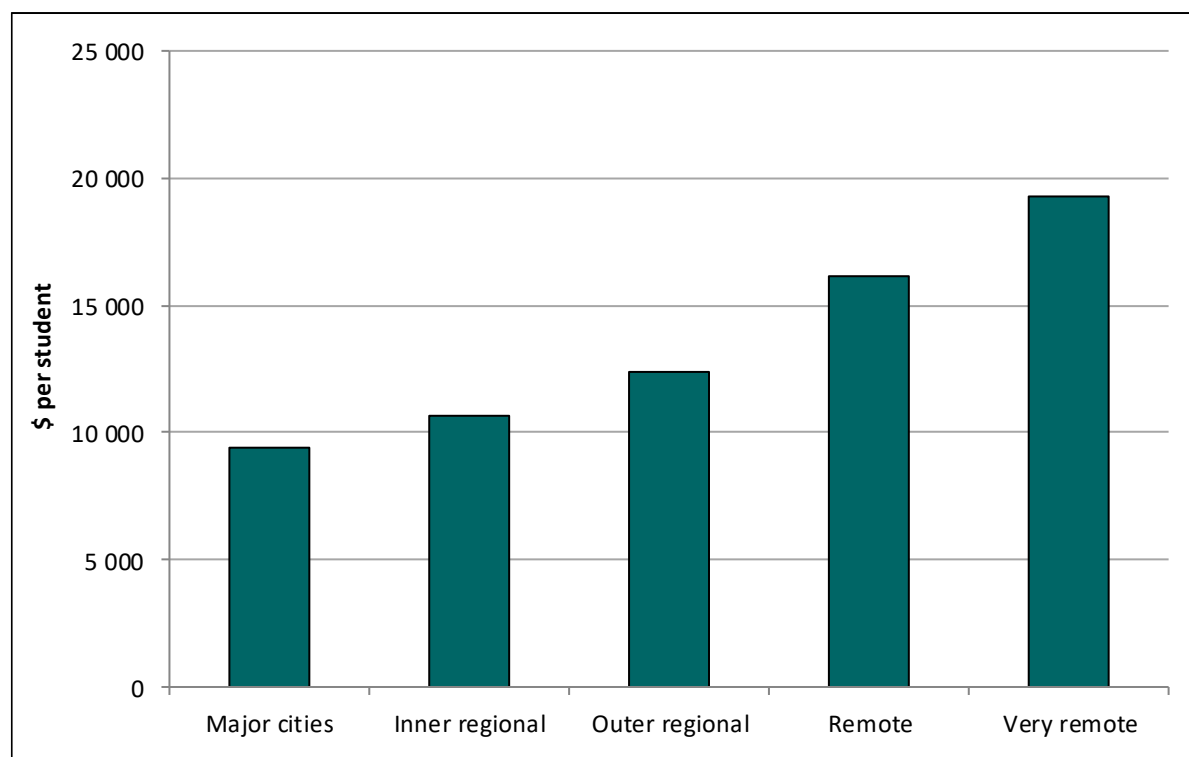
Note: The regression also estimated a fixed cost of \$192 901 per school.

Source: Commission calculation using ACARA.

Location

58 Figure 1 shows that States spend considerably more per student on schools in more remote locations than schools in more accessible areas. This is consistent with what States have told the Commission about how they fund schools.

Figure 1 State spending per government school student by remoteness areas, 2016



Source: Commission calculation based on ACARA data.

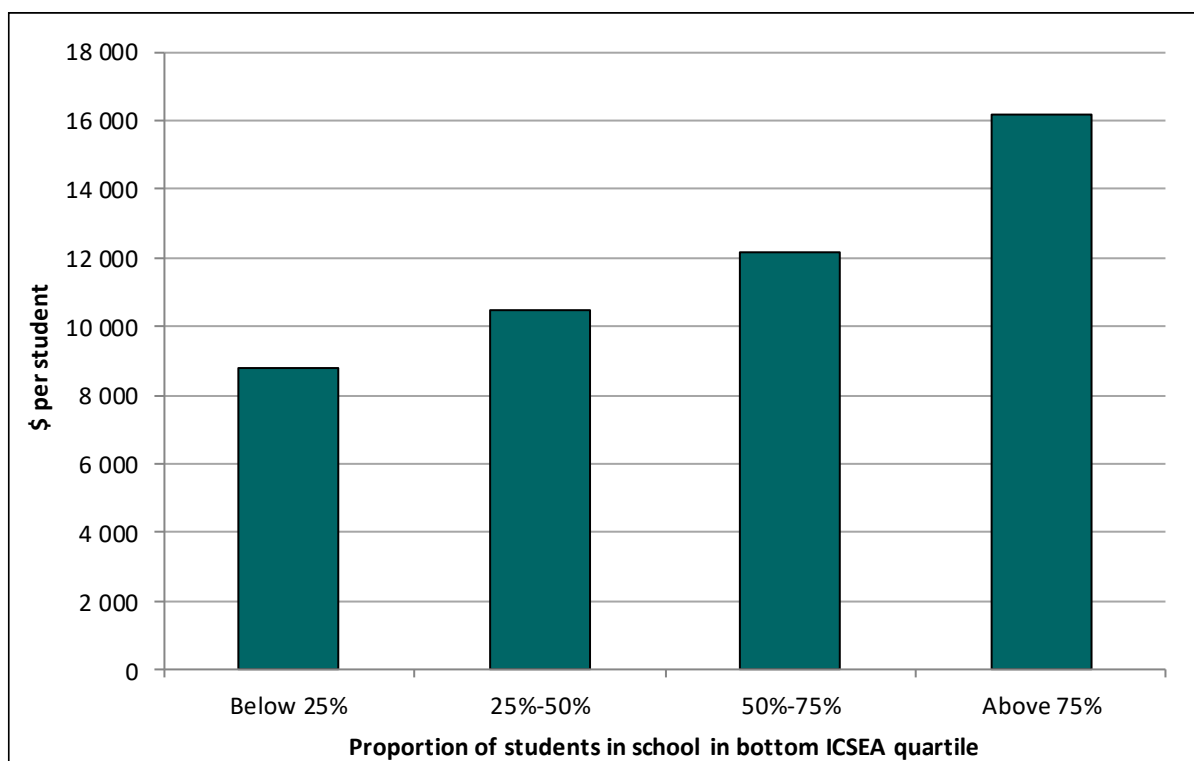
59 The model underpinning Table 12 has only two remoteness categories, outer regional and remote Australia (remote and very remote combined). The base student cost represents the cost of a student in a major city or inner regional Australia. Notwithstanding the pattern shown in Figure 1, inner regional areas were combined

with major cities because analysis indicated that, after controlling for other socio-demographic differences, inner regional costs were similar to those of major cities, and remote area costs were greater than non-remote area costs.

Socio-economic status

60 Figure 2 shows that States spend considerably more on students from a low socio-economic status (SES) background than those of higher SES backgrounds. This is consistent with what States have told the Commission about how they fund schools.

Figure 2 State spending per government school student by concentration of low SES students, 2016



Source: Commission calculation based on ACARA data.

61 Low SES students, in this assessment, are captured using the proportion of students in the lowest Index of Community Socio-Educational Advantage (ICSEA) quartile. All States supported the use of ICSEA. Although some States queried the potential for double counting when using ICSEA with measures for remoteness (as remoteness is a component of ICSEA), the approach taken by the Commission precludes any double-counting.⁹

62 The Commission considers ICSEA to be a better measure of school student SES than the approach adopted in the 2015 Review based on the Indigenous Relative

⁹ Using a regression approach, to the extent to which any additional cost of remoteness is captured in ICSEA, this will reduce the costs attributable to remoteness.

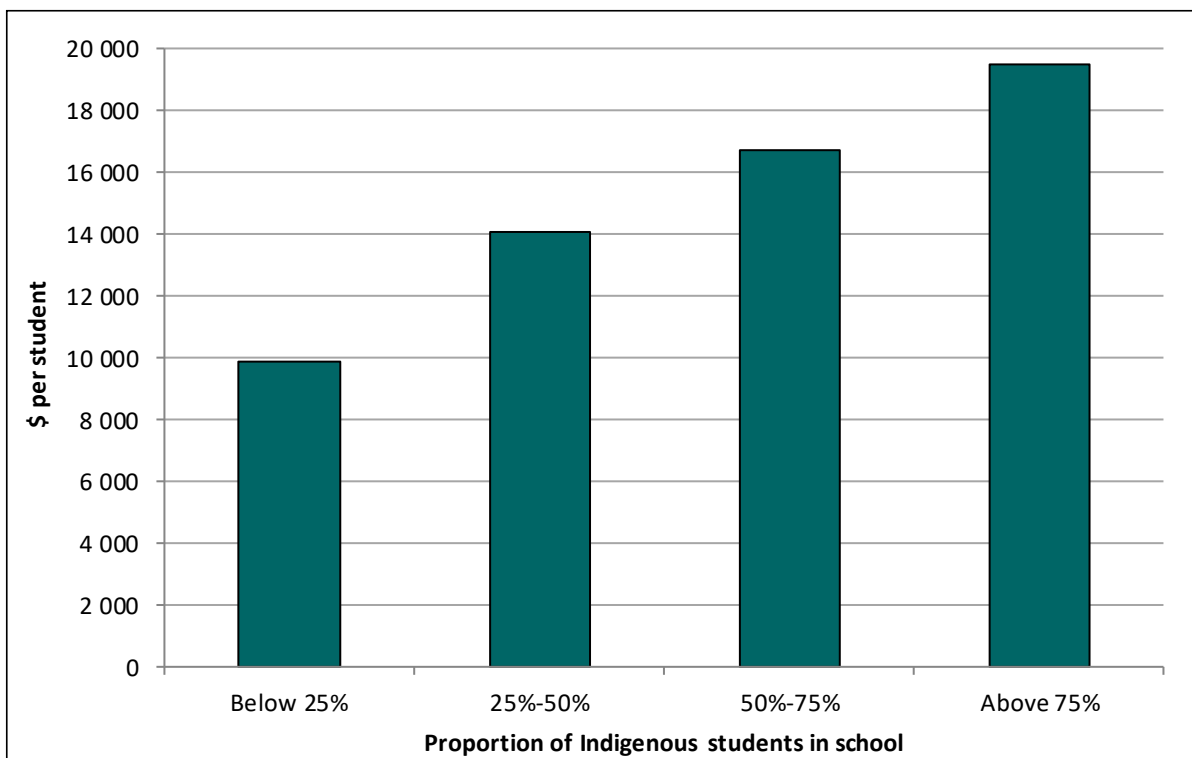
Socio-economic Outcomes (IRSEO) and Non-Indigenous Socio-economic Index for Areas (NISEIFA). This is because it is an individual student-based measure rather a measure related to the total population in the area the school is located (but not necessarily where the students live). Many States use a State-specific measure like ICSEA as an integral part of their funding formula. ICSEA allows for a more accurate measure of SES in schools.

- 63 While States provide additional funding to the most disadvantaged students, some States have told the Commission they also provide some additional funding to moderately disadvantaged students. The analysis did not support such a distinction.

Indigenous status

- 64 States spend more per student on schools with large proportions of students identifying as Indigenous than schools with lower proportions, as shown in Figure 3. This is consistent with what States have told the Commission about how they fund schools.

Figure 3 State spending per government school student by proportion of Indigenous students, 2016



Source: Commission calculation based on ACARA data.

- 65 The 2015 Review terms of reference required the Commission to ‘more appropriately capture the changing characteristics of the Indigenous population’. To meet this requirement, the Commission separately identified Indigenous and non-Indigenous socio-economic status (IRSEO and NISEFIA respectively) in assessing costs of different

groups of school students. However, in the absence of student level funding data this approach required an assumption that Indigenous and non-Indigenous students in the same school receive the same funding. During State visits, States explained their school funding formula to the Commission, and the Commission considers that its previous assumption can no longer be supported.

- 66 The Commission’s approach uses cost weights for low SES students (bottom ICSEA quartile) and Indigenous students. The Northern Territory supported the use of ICSEA and the general approach to estimating student cost weights. However, it considered that an approach is necessary that captures the ‘changing characteristics of the Indigenous population’, as required by the 2015 terms of reference. It considered that proportion of Indigenous students in a school may provide this.
- 67 Some States¹⁰ have school funding formulas where the per-student additional funding for Indigenous students increases as the proportion of Indigenous students in a school increases. Western Australia’s funding formula gives 30% more Indigenous funding per Indigenous student in schools where 100% of students are Indigenous compared to schools where only 5% of students are Indigenous.¹¹
- 68 To the extent an increasing proportion of Indigenous students in a school coincides with an increasing level of disadvantage of those students, the model captures this by the allocation of both Indigenous and ICSEA weights.

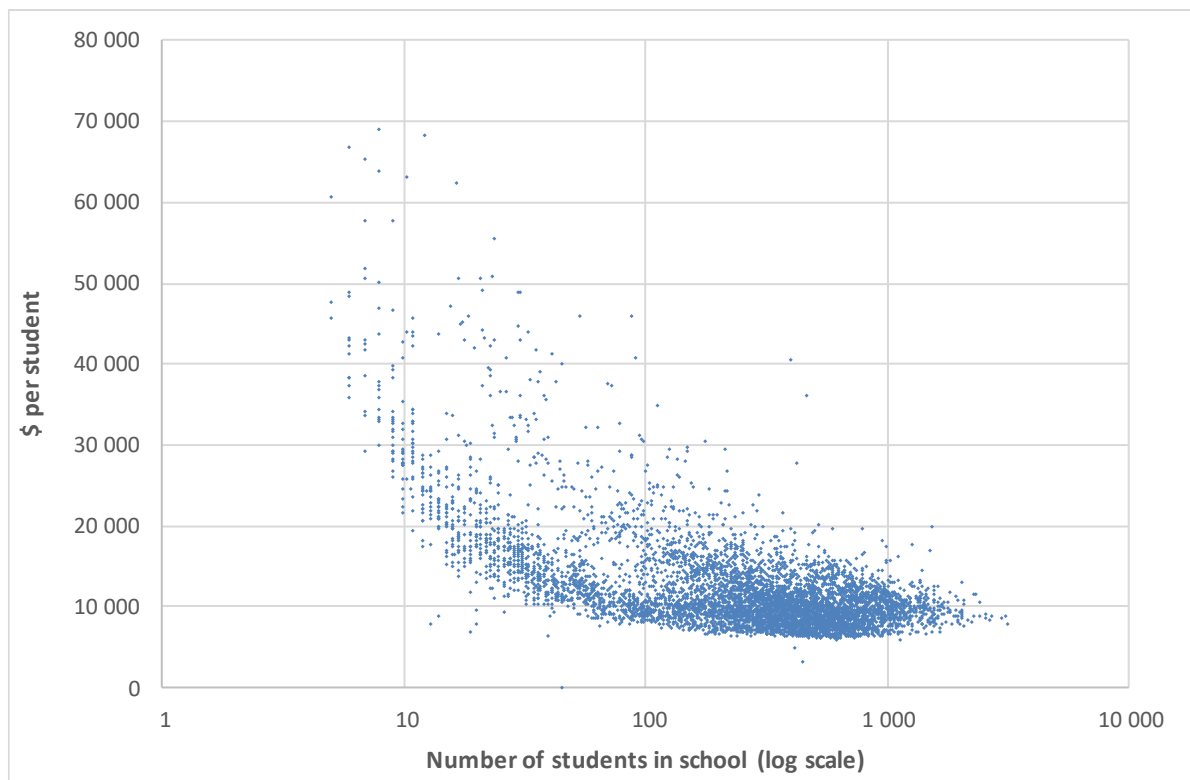
Service delivery scale

- 69 The fixed cost of operating a school results in the per student cost of a school decreasing as school size increases, as is shown in Figure 4. While the total cost of a school increases with increasing students, the model estimates that there is a fixed cost of running a school, above which there is a linear relationship based on student numbers.

¹⁰ As well as the Commonwealth quality schools funding calculations.

¹¹ Information provided during 2018 Commission visit to Western Australia.

Figure 4 State spending per student by size of school, government schools, 2016



Source: ACARA data.

- 70 Table 13 shows the average school size in each remoteness area. The service delivery scale assessment allocates the fixed costs of schools on this basis. That is, with the model finding that the estimated fixed cost of a school is \$192 901 per school, and with an average very remote school having 114 students, States spend \$1,695 ($\$192\,901/114$) per student for the fixed costs of running a very remote school. This cost represents 22% of the base student cost, and so very remote students are allocated a cost weight of 22% for service delivery scale.
- 71 As major city schools tend to be larger, averaging 552 students each, the estimated fixed costs of \$192 901 are allocated between these 552 students. States spend \$350 per student on these fixed costs. This represents 5% of the base student cost. Average school size in each remoteness area is used because remoteness area is a policy neutral driver of school size.

Table 13 School size by remoteness area, government schools, 2016

Remoteness area	Number of schools	Students	Average size	Fixed cost per student	Cost weight
	no.	no.	no.	\$	%
Major cities	3 008	1 660 013	552	350	4.6
Inner regional	1 629	446 057	274	704	9.2
Outer regional	1 045	229 790	220	877	11.5
Remote	195	34 059	175	1 104	14.5
Very remote	187	21 277	114	1 695	22.2
Total	6 064	2 391 196	394	489	6.4

Source: Commission calculation using ACARA data.

- 72 Victoria considered that the Commission’s approach over-estimates the effect of SDS, and a better approach would be to include whether a school was in a service delivery scale area in the model. The modelling did not support such an approach.
- 73 States with more dispersed student populations will tend, on average, to have a greater number of smaller schools, which are more expensive to operate on a cost per student basis. The Commission considers that the SDS assessment adequately captures this.

Adjusted student numbers

- 74 States have historically had different policies on school starting age, and so the number of students in pre-year 1 classes varied considerably for policy reasons. Because of this, in the 2015 Review, the Commission used the number of year 1 students as a proxy for the number of pre-year 1 students. Since 2014, when South Australia adopted national school starting policies, there have been no major policy differences affecting the number of pre-year 1 students. As such, the Commission is no longer making any adjustments and is using all FTE student numbers, as published by the ABS.

State spending on non-government schools

- 75 The Commission was inclined to use the same regression model for State spending on non-government schools as for government schools. However, a negative cost weight for Indigenous students in all years seemed unreliable, and so the model has been slightly adjusted to remove this variable. In 2014-15 and 2015-16, the outer regional coefficient was smaller than the remote coefficient, while in 2016-17 it was not. The Commission considers that retaining both outer regional and remote variables is warranted.
- 76 The cost weights shown in Table 14 are based on the non-government model. The cost weight for low SES students is considerably higher than in government schools, possibly reflecting that State spending on non-government schools incorporates the

capacity of parents to pay fees as well as the educational disadvantage suffered by low SES students.

- 77 The Commission notes the lower cost weights for students in outer regional, remote and very remote areas than in the State spending on government schools component (see Table 12). However, it considers that within a remoteness area, non-government schools are likely to be, on average, less remote and isolated than government schools.

Table 14 State spending on non-government schools, 2016

	Value estimated by regression	Cost weight
	\$	%
Base student cost	1 874	100.0
Additional cost for		
Outer regional student	162	8.6
Remote or very remote student	134	7.2
Low SES student	3 146	167.9

Note: The regression also estimated a fixed cost of \$53 001 per school.

Source: Commission calculation using ACARA data.

User charges

- 78 For the 2015 Review, gross State expenses were assessed in the schools assessment, and school user charges were assessed EPC in Other Revenue.
- 79 In the 2020 Review, the Commission is netting off user charges in the schools assessment, and calculating a regression of ACARA measures of net State expenditure per student to assess net State expenditure. Victoria, Tasmania and the Northern Territory did not find the arguments in the DAP to be convincing, and would like more explanation of the reasons for the change and assurances that the change will not lead to anomalous results.
- 80 ACARA data indicate that in 2016-17 fees, charges and parental contributions totalled \$1.0 billion in government schools. These compare with GFS user charges of \$1.1 billion.
- 81 The Commission understands that the ACARA fees, charges and parental contributions represent the GFS user charges. Therefore, the ACARA concept of State government recurrent spending relates to the GFS concept of expenditure net of user charges. The Commission accepts that States do not collect parental contributions centrally and allocate them to State schools, but considers that while parental contributions never enter consolidated revenue, schools report on their value, and States allocate them as user charges in GFS. It is difficult to see what other sources would contribute \$1.1 billion of user funding in schools.

Student transport

- 82 The 2015 Review assessment of student transport comprised a number of judgments supplementing poor quality data.
- The estimate of total expenditure of \$1.5 billion in 2017-18 is not thought to be reliable, as some States struggle to separate the costs of transport of school students from the costs of transport of other people.
 - The split between urban and rural transport expenses is based on an assumed 50-50 split, as State GFS data are deemed too unreliable.
 - The assessed disabilities rely on a complex synthetic assessment based on assumptions about student transport patterns rather than data on what States do.
- 83 States can have difficulty in reliably splitting spending on transport of school children from other transport expenses. Including student transport expenses with such expenses will improve the quality of the expense data. The disabilities affecting the cost of transporting school children are likely to be more closely related to the disabilities affecting the cost of transporting other people, than to the disabilities affecting the cost of educating school children. The Commission proposes to assess student transport expenses in the urban transport component of the Transport category. For further information see Attachment 19 — Transport.

Commonwealth funding of non-government schools

- 84 In the 2015 Review, the Commission assessed the revenue States received from the Commonwealth for non-government schools. It also assessed the expenditure of this funding. States have no policy choice in the distribution of this money, and the States are effectively funding conduits. Both of these assessments are made on the share of the payment received, and in net terms this has no effect on the assessment of fiscal capacities.
- 85 The Commission considers it would be simpler and more transparent to exclude both the revenue and expenses from all calculations. All States agreed with this proposal.

OTHER ISSUES CONSIDERED BY THE COMMISSION

- 86 There were a number of other issues considered by the Commission, largely in response to concerns raised by States. These issues related to the method for measuring existing disabilities or requests for new disabilities that were not included in the 2015 Review assessment. The main reasons for not assessing certain disabilities identified by States are:
- the conceptual case for a disability has not been established

- an assessment would not be material, that is, redistribute more than \$35 per capita for any State¹²
- data are not available to make a reliable assessment.

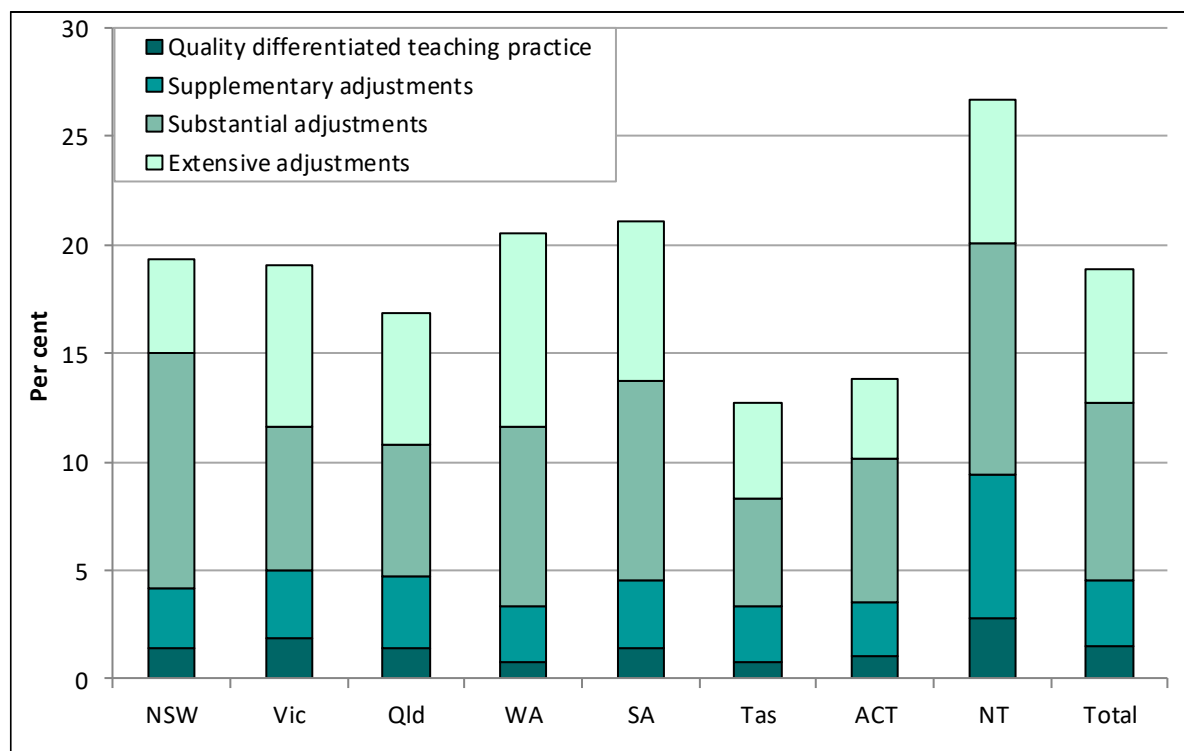
Students with disabilities

- 87 States provide additional resources to students with disabilities. In previous reviews the Commission has not had data that identify the number of students with disabilities across States on a comparable basis, and so has been unable to develop a reliable assessment. In recent years the States and the Commonwealth have developed the ‘Nationally consistent collection of data on school students with disability’ (NCCD). The measure of students with disabilities is explicitly labelled ‘Nationally consistent’. However, in early 2017, the then Commonwealth Education Minister Senator Simon Birmingham said ‘this data ... hasn't come to a credible landing point just yet ... There's much more work to be done by the states and territories to ensure that (the NCCD data) truly is nationally consistent.’¹³
- 88 Victoria, South Australia, Tasmania and the ACT agreed that the current available data remain insufficiently reliable for an assessment. New South Wales, Queensland and the Northern Territory argued that the NCCD is of sufficient reliability to be used in the assessment.
- 89 Figure 5 shows the proportion of students for whom adjustments are made by teachers because those students have disabilities. The Commission considers that some of these results are counter-intuitive, and regard this as support for the Minister’s view that the NCCD is not yet nationally consistent.
- 90 Evidence shown in Figure 5 that the Commission finds questionable includes that:
- Tasmania has the lowest level of students with disabilities in the country, at 30% below the national average, when according to the census it has the second highest
 - Western Australia has twice the proportion of students requiring quality differentiated teaching as New South Wales.

¹² The Commission has set a materiality threshold for including a disability. A disability assessment must redistribute more than \$35 per capita away from an EPC assessment for any State to be included. To be included, a disability assessment must redistribute more than \$35 per capita away from an equal per capita assessment for any State.

¹³ [ABC news website](http://abc.net.au/news/2017-02-16/new-figures-point-to-a-massive-shortfall-in-funding-for-student/8271824), (<http://abc.net.au/news/2017-02-16/new-figures-point-to-a-massive-shortfall-in-funding-for-student/8271824>).

Figure 5 Proportion of students with disabilities, 2017



Source: COAG Education Council.

- 91 On 15 November 2018 the Education Minister, The Hon Dan Tehan, announced a review to ‘...examine how Commonwealth funding is used to support students with disability and report back by December 2019. [It] will also examine the Commonwealth’s assurance processes to ensure the accuracy of the information used to calculate a school’s Commonwealth funding entitlement.’
- 92 Despite these concerns, the Commonwealth does use the NCCD in its Quality schools allocation calculations. The Commonwealth’s model is designed to measure variance between schools as well as variance between States. Variance between schools in the proportion of students with a disability is much greater than variance between States, and so is a more important driver for the Commonwealth’s model. The NCCD may also be seen as more consistent within each State. Hence while not perfect, the NCCD could be an appropriate data source to use in the allocation of funds between schools. However, in the Commission’s view, these data are not, as yet, sufficiently reliable to be used for its purposes.

English proficiency

- 93 New South Wales considered that language background other than English (LBOTE) should be included in a number of expense categories including Schools. The Commission accepts the conceptual case that LBOTE students are more costly to educate than non-LBOTE students.

- 94 While ACARA data show that 25% of students have a language background other than English, Australian Government Department of Education data show 3.5% of students have poor English proficiency. The Commission considers there to be a strong conceptual case that this group incur higher costs per student, as it captures only students that require additional support for their English proficiency. Victoria expressed concerns with the ACARA measure of LBOTE noting that it could be a misleading measure that captures a significant number of students that speak English fluently.
- 95 Only 3.5% of students have a low proficiency in English, and while there are differences in States' shares of these students, they are not sufficient to produce a material assessment of English proficiency.

Secondary school students

- 96 Whether a school is a primary school, secondary school or combined makes a significant difference to the cost of a school, both in terms of the fixed and variable costs.¹⁴ However, the major difference between States in their number of primary and secondary school students is driven by South Australia's policy decision to include Year 7 in primary school. Whether States have combined primary-secondary schools or have separate schools is partly driven by the demographics of an area — combined schools are much more common in small isolated communities. However, they also significantly reflect State policy choice.
- 97 The Commission considers that while school type is a strong predictor of school costs, it is inappropriate for use in measuring State fiscal capacities.

Centrally managed school costs

- 98 The Commission calculates the relative cost of students and applies this to all school costs as identified in GFS, including curriculum development and other central office or out of school costs.
- 99 New South Wales stated that only some part of State spending is allocated on a needs basis. Cleaning and maintenance, teacher learning support and upskilling of teachers, for example, are not needs based. It argued that these costs should be considered equal per student. The Northern Territory argued that much of its centrally managed resources relate to the Northern Territory Indigenous Education Strategy, specialist teachers and support, teacher housing, special education support programs, Indigenous specific curriculum, engagement programs and staff relocation costs. Due to the centrally managed approach, the loadings in the Northern Territory's student needs based funding model do not accurately reflect the total funding associated

¹⁴ For example, States spend about \$1 200 more per student on secondary students than primary students.

with specific groups of students. These centrally managed resources, as a default, are generally distributed across students on a total enrolment basis. As a result, ACARA reported expenditure would likely significantly understate expenditure on Indigenous, remote and/or disadvantaged students within the Northern Territory.

- 100 The Commission understands that ACARA allocate all school costs to individual schools on the most appropriate basis available to it. The Commission’s model based on this data therefore should give the appropriate weight to the SDC characteristics of schools. The Commission has no better data upon which to allocate school expenses, and so is assessing all school expenses on the basis of the SDC assessment of school expenses.

Early childhood education

- 101 Victoria considers that Commission staff should investigate the feasibility and materiality of separately assessing early childhood education.
- 102 In 2016-17, States spent around \$1.4 billion on pre-school education, or about \$56 per capita. These expenses are assessed as part of the government, and non-government, funded school expenses. Unlike schools, the split between government and non-government preschools is very policy influenced. According to the ABS, preschool education enrolment rates are broadly similar for Indigenous and non-Indigenous students, and only slightly higher in major cities than in more remote areas. It seems reasonable that the higher cost weights for disadvantaged groups in the schools assessment would be similar to the cost weights that might apply to preschool students. It seems very unlikely that an assessment would be materially different to including these costs in with other school costs.

REDISTRIBUTION FROM AN EPC ASSESSMENT

- 103 Table 15 shows the extent to which the assessment for this category differs from an EPC assessment of schools expenses. States with a positive redistribution are assessed to have above average spending requirements and States with a negative redistribution are assessed to have below average spending requirements. In per capita terms, Victoria, Queensland, Tasmania and the Northern Territory experience the largest redistributions.

Table 15 **Redistribution from an EPC assessment, Schools, 2017-18**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	-189	-996	675	218	-106	92	-47	353	1 339
\$ per capita	-24	-156	136	84	-61	176	-113	1 430	54

Note: The redistribution is the difference from an EPC assessment of category expenses.

Source: Commission calculation.

104 The main reasons for these redistributions are the differences between State student SDC profiles.

105 The main reasons for the redistributions for each State are that:

- New South Wales has a low share of government school students and students in more remote areas
- Victoria has a low share of government school students, and low shares of all high cost groups of students
- Queensland, Western Australia, Tasmania and the Northern Territory have above average shares of government school students and of most high cost groups of students
- The redistribution away from South Australia is primarily due to its low assessed wage costs
- The ACT has a below average share of low SES students, which is somewhat offset by high wage costs.

106 Table 16 provides a summary of the main disabilities contributing to the redistribution from an EPC assessment for this category.

Table 16 Major reasons for the redistribution, Schools, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
SDC	-30	-153	135	95	-13	205	-182	1 206	55
Student Numbers	-17	-56	67	45	-14	36	19	166	22
Indigenous	1	-24	17	7	-4	16	-16	220	7
Low SES	5	-25	15	-6	3	93	-117	201	10
Remoteness	-14	-17	10	25	13	23	-23	334	9
Schooling resource Standard	-6	-30	26	25	-11	36	-45	286	11
Service Delivery Scale	-5	-10	10	4	1	38	-16	114	4
Wages	12	7	-8	-14	-51	-59	96	60	8
Total	-24	-156	136	84	-61	176	-113	1 430	54

Note: The redistributions from an EPC assessment are illustrative. Disabilities may not add due to rounding.

Source: Commission calculation.

UPDATING THE ASSESSMENT

107 As required by the terms of reference, the Commission will incorporate the latest available data in the assessment during the annual updates. This will allow the assessment to reflect changes in State circumstances. All data used in the schools assessment will be updated annually:

- ABS student data by Indigenous status

- ACARA schools data to apportion student SDC shares (remoteness and SES) and to update student cost weights through the regression model
- DET funding data for the Commonwealth funding of government schools component.

OUTSTANDING ISSUES

108 From the Commission's perspective, there are no outstanding issues for this assessment.

FURTHER CONSULTATION

109 Before the release of the final report by 28 February 2020, there will be opportunities for consultation on this assessment. For further information about this category, please contact Jacob Savage on Jacob.Savage@cgc.gov.au.

ATTACHMENT 11

POST-SECONDARY EDUCATION

Summary of proposed changes to the 2015 Review methodology

- The Commission has introduced a category specific remoteness gradient, replacing the general gradient.
- The Indigenous cost weight has been updated with new data from States.
- The way in which socio-economic status (SES) quintiles are aggregated into three groups each with similar use patterns has been revised.

- 1 This attachment contains the Commission’s draft proposals for the Post-secondary education category following consultation with the Commonwealth and States.

SERVICE OVERVIEW

- 2 State net expenses on Post-secondary education were \$5.6 billion in 2017-18, representing 2.6% of total State expenses, as shown in Table 1.
- 3 Post-secondary education covers State expenses on vocational education and training (VET) and other higher education. Most State spending on post-secondary education is for VET, with less than 5% of funding for other higher education services. State VET expenses include spending on subsidised courses provided in State government institutions and subsidies provided to private training providers.
- 4 Public technical and further education (TAFE) institutes and private registered training organisations (RTOs) are the main providers of VET services in Australia.

Table 1 State expenses on Post-secondary education by State, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Total expenses (\$m)	1 596	1 977	898	508	342	78	113	118	5 630
Total expenses (\$pc)	201	310	181	197	198	148	271	480	227
Proportion of operating expenses (%)	2.4	3.9	2.0	2.0	2.2	1.6	2.8	2.2	2.6

Note: Expenses shown on a net basis.

Source: Commission calculation using State budget data.

- 5 Table 2 shows the share of State expenses on Post-secondary education from 2014-15 to 2017-18.

Table 2 State expenses on Post-secondary education, 2014-15 to 2017-18

	2014-15	2015-16	2016-17	2017-18
Total expenses (\$m)	5 255	4 899	5 380	5 630
Proportion of total operating expenses (%)	2.8	2.5	2.6	2.6

Note: Expenses shown on net basis.

Source: Commission calculation using ABS Government Finance Statistics (GFS) and State budget data.

- 6 User charges (Table 3) were \$1.3 billion in 2017-18 and include student fees for services delivered, and some revenue from ancillary activities. In this category, user charges are deducted from total category expenses so that the assessment is applied to net category expenses.

Table 3 Post-secondary education user charges, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Revenue (\$m)	386	356	270	160	90	44	25	7	1 337
Revenue (\$pc)	49	56	54	62	52	85	59	28	54

Note: User charges refer to revenue from the sale of goods and services classified in GFS to economic type framework (ETF) 112.

Source: Commission calculation using ABS GFS and State budget data.

State roles and responsibilities

- 7 States provide VET services through networks of public TAFE institutes and private RTOs. These providers offer courses spanning foundation skills, certificate I to IV programs including apprenticeships, diplomas, advanced diplomas and bachelor degrees. The campuses used for service delivery are widely dispersed in all States, and States with dispersed, small communities provide services in many of those communities. All State VET funding models (except Tasmania and the ACT) include regional loadings to recognise the higher costs of service delivery in regional areas.
- 8 Most States provide Indigenous-specific programs to facilitate greater Indigenous participation and to support Indigenous students. They include incentive payments to private sector employers to take on Indigenous trainees and apprentices, programs to improve access to training opportunities and to improve employment outcomes, and programs to develop and deliver courses targeting Indigenous students. These programs are available in urban and regional locations.
- 9 The level of subsidy for each course and qualification level are a matter of individual State policy. States consider a range of factors in setting subsidies including staffing levels, what equipment and facilities they involve, the level of qualification and relevance of the training to State skill requirements (or public value). States subsidise

a higher proportion of the cost of lower level courses (foundation skills, and certificate I and II) and apprenticeships.

- 10 Part of the cost of subsidised training is met through student fees. Eligibility criteria for fee exemptions and concessions are a matter of individual State policy. All States offer concessions or exemptions to government benefit recipients, and most offer them to Indigenous students.
- 11 In addition to subsidised training, public VET providers also provide fee-for-service training. The cost of this training is fully cost recovered.

Commonwealth roles and responsibilities

- 12 The Commonwealth provides the vast majority of funding for higher education. It also provides support for students by way of income support payments, loans and fee deferrals. Commonwealth higher education expenses are not included in the Post-secondary assessment as they do not affect States' assessed fiscal capacities.
- 13 In addition to general revenue assistance, the Commonwealth provides funding to the States for post-secondary education comprising the National skills and workforce development specific purpose payment (SPP) and national partnership payments (NPPs). Table 4 shows the Commonwealth payments to the States for post-secondary education in 2017-18.
- 14 The main payment is the National skills and workforce development SPP which provided \$1.5 billion for the States in 2017-18.

Table 4 Commonwealth payments to the States for Post-secondary education, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
National skills and workforce development SPP (\$m)	478	386	300	156	104	32	25	15	1 495
Skilling Australians Fund (\$m)	100	52	39	10	19	8	6	3	237
State grants - Indigenous - Post-secondary education (\$m)	5	0	2	0	0	0	0	0	8
Total (\$m)	583	438	341	166	123	39	31	18	1 740
Total (\$pc)	74	69	69	64	71	75	75	73	70

Note: Commonwealth Own Purpose Expenses (COPEs), such as funding for universities, are not included.

Source: Commonwealth *Final Budget Outcome, 2017-18*.

- 15 The complete list of Commonwealth payments and their treatment is available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).¹

¹ Most Commonwealth payments to the States affect the grant distribution but some do not. The Commission refers to payments that affect the grant distribution as 'impact' payments. For more information, see Attachment 2— Commonwealth payments.

CATEGORY STRUCTURE

16 The assessment of the Post-secondary education category is undertaken in one component.

17 Table 5 shows the category’s assessment structure and the disabilities that apply.

Table 5 Category structure, Post-secondary education, 2017-18

Component	Component expense	Disability	Influence measured by disability
	\$m		
Post-secondary education	5 630	Socio-demographic composition	Recognises that for the working age population, Indigenous status, remoteness and socio-economic status affect the use and cost of providing services.
		Cross-border	Recognises the cost to the ACT of providing post-secondary education to New South Wales residents.
		Location	Recognises differences in wage costs between States.

Source: Commission calculation using ABS GFS and State budget data.

Category and component expenses

18 The main data sources for calculating category and component expenses are ABS GFS and State budget data.²

ASSESSMENT APPROACH

19 Expenses for this category include State spending on:

- public technical and further education (TAFE) institutes
- privately run registered training organisations (RTOs)
- university education.

20 The three disabilities assessed for post-secondary education are:

- socio-demographic composition (SDC)
- cross-border services
- wage costs.

² Unless otherwise stated, category and component expenses for the first two assessment years are sourced from ABS GFS. States provide data for the most recent assessment year because GFS data are not available in time for the annual update.

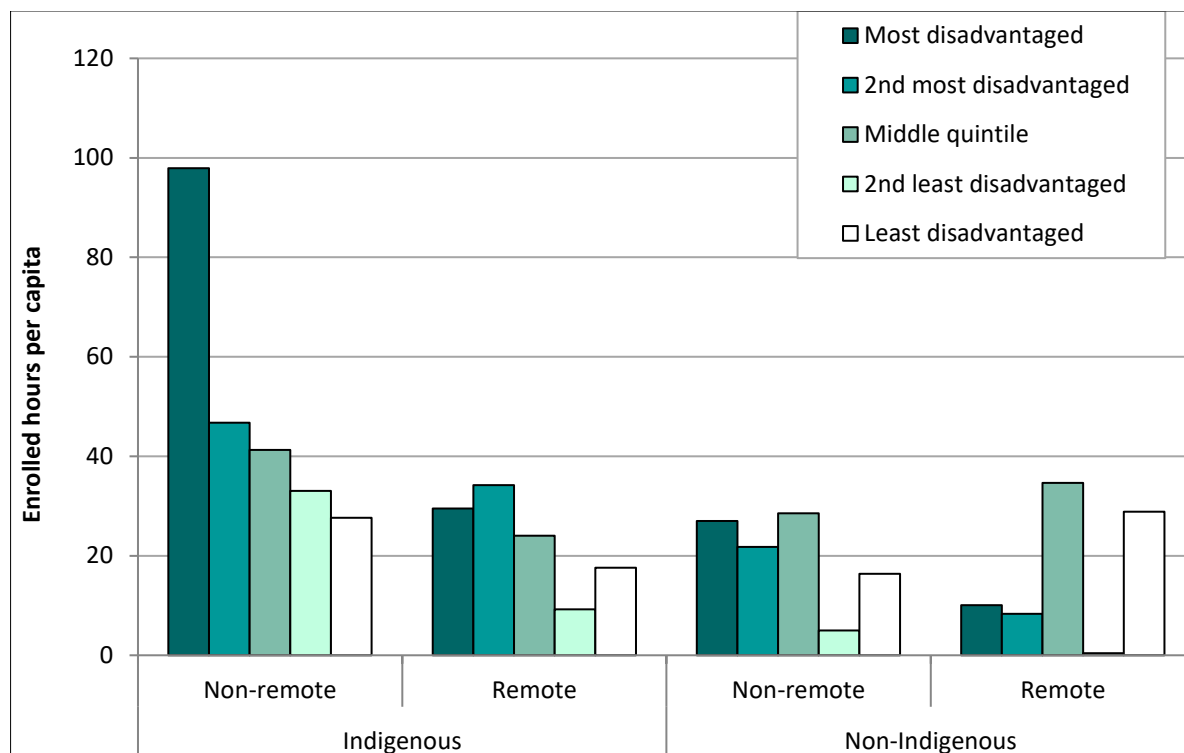
Socio-demographic composition

- 21 Spending by each State on post-secondary education services is affected by the size of its working age (15 to 64 years) population and the presence of those population groups that use services more intensively:
- Indigenous people
 - socio-economically disadvantaged people
 - people living in more remote areas.
- 22 There is a strong conceptual case that both socio-economic status (SES) and remoteness affect the use of post-secondary education services. However data limitations³ mean that measured patterns may not always reflect the underlying societal trends.
- 23 In the 2015 Review, volatility in usage patterns of VET services by SES was resolved by grouping the bottom 40%, the middle 20% and the top 40%. Non-Indigenous SES was measured using the Non-Indigenous Socio-Economic Indexes for Areas (NISEIFA), while Indigenous SES was measured using the Indigenous Relative Socio-Economic Outcomes (IRSEO) index. SES patterns were not evident in remote areas, and so the Commission did not disaggregate remote areas by SES. Figure 1 shows use patterns for the 2020 Review. Those use patterns suggest it is not appropriate to differentiate SES areas within remote areas, and that grouping of SES quintiles remains appropriate for non-remote areas.⁴

³ NCVER data are collected by residential postcode. SES of postcode areas does not always accurately reflect the SES of the SA1s or Indigenous areas upon which population numbers are based.

⁴ Remoteness is measured using ABS Remoteness Areas.

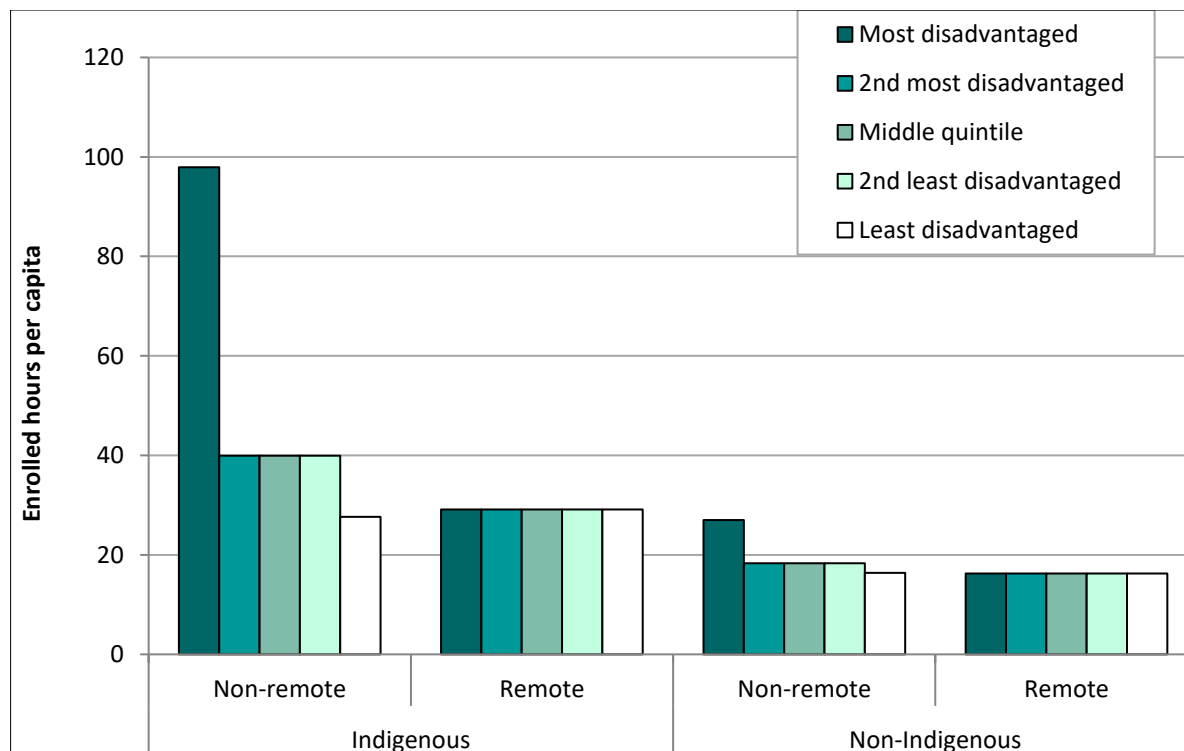
Figure 1 Hours of post-secondary education per capita, 2017-18



Source: Commission calculation.

24 For the non-remote Indigenous population, the groupings used in the 2015 Review would result in the non-remote middle 20% of the Indigenous population having considerably higher use than either the bottom 40% or top 40%. There is no conceptual case for this. The Commission considers that applying the groupings shown in Figure 2 produces the simplest and most reliable assessment of differences in use rate between different population groups.

Figure 2 Hours of post-secondary education per capita, assessment groupings, 2017-18



Source: Commission calculation.

Socio-demographic costs

- 25 In addition to different socio-demographic groups using post-secondary education services at different rates, some groups are more expensive per hour than others.
- 26 Providing services in remote areas is more expensive than providing a similar service in a more accessible location. In the 2015 Review this was assessed by extrapolating a general gradient, calculated using Schools and Police data, to Post-secondary education. In this review the Commission has obtained State data to measure the effect of remoteness on the cost of delivering post-secondary education services.
- 27 The Commission observes it is more costly to deliver services to Indigenous students, as most States offer Indigenous-specific programs. For the 2015 Review, State data were used to calculate a cost weight of 1.35. This cost weight has been re-estimated for the 2020 Review. Data has been received from all States with the cost weight being revised upward, to 1.40. There has been no change in the concept underpinning this cost weight.
- 28 Some Indigenous programs in some States represent a proportional cost, which can interact with other cost weights (such as remoteness). However, most spending on Indigenous programs is a fixed amount that does not interact with other cost weights. The Commission has treated Indigenous funding programs as fixed amounts. This is a

simpler and more appropriate approach, and avoids any potential double counting of costs.

Wage costs

29 Differences in wage costs between States have a differential effect on the cost of providing services. There is a general method for measuring the influence of wage costs in components where the disability applies. For a description of the method see Attachment 24 — Wage costs.

Cross-border services

30 A cross-border disability is included to reflect the services each State provides to residents of other States. The only material cost is the ACT’s net cost of providing services to New South Wales residents. The National Centre for Vocational Education Research (NCVER) data allow the Commission to measure this disability. In 2017, the net flow of services to residents of New South Wales represented 17% of the ACT’s annual contact hours.

Data and method

31 The Commission considers that the features of the socio-demographic composition that drive cost differences are Indigenous status, SES, remoteness and age.

Table 6 SDC breakdown, Post-secondary education

Indigenous status	IRSEO/NISEIFA	Remoteness use	Remote costs	Age
Indigenous	Low SES (bottom quintile)	Non-remote	Major cities	15 to 65
Non-Indigenous	Middle SES (middle 60%) High SES (top quintile)	Remote	Inner regional Outer regional Remote Very remote	

Source: Commission decision.

32 The NCVER provides annual data on government funded contact hours by Indigenous status and postcode for persons between 15 and 64 years of age. The Commission uses the postcode information to assign SES and remoteness characteristics to the contact hours for the working age population.

33 State provided data on the additional costs of Indigenous students and the additional costs associated with remoteness are used to calculate Australian average cost weights for Indigenous status. These cost weights are calculated from State data by combining:

- the relative cost weights for different regions

- the relative cost of Indigenous specific programs per Indigenous contact hour.

34 The Commission combines the cost weights and service use hours by the SDC breakdown to calculate a national average cost per capita for each SDC population group. The national average costs per capita are applied to each State's estimated resident population (ERP) to derive SDC assessed expenses for each population group. The aggregated SDC assessed expenses are then combined with the cross-border factors and the wages factors to calculate category assessed expenses.

35 Table 7 shows the calculation of total assessed expenses for 2017-18.

Table 7 Illustrative assessment, Post-secondary education, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SDC assessed expenses (\$m)	1 788	1 376	1 160	595	398	135	82	96	5 630
Cross-border	0.991	1.000	1.000	1.000	1.000	1.000	1.171	1.000	1.000
Wage costs	1.005	1.003	0.996	0.994	0.977	0.974	1.043	1.027	1.000
Assessed expenses (\$m)	1 781	1 381	1 157	591	389	131	100	99	5 630
Assessed expenses (\$pc)	225	216	233	229	225	250	240	400	227

Source: Commission calculation.

CATEGORY CALCULATIONS

36 Table 8 brings the assessed expenses for the category together to derive the total assessed expenses for each State for the category. It shows at the component level how each disability assessment moves expenses away from an equal per capita (EPC) distribution to obtain assessed expenses.

Table 8 Illustrative category assessment, Post-secondary education, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Post-secondary education									
EPC	227	227	227	227	227	227	227	227	227
SDC	-2	-12	6	3	3	29	-31	162	0
Cross-border	-2	0	0	0	0	0	39	0	0
Wage costs	1	1	-1	-1	-5	-6	10	6	0
Total assessed expenses	225	216	233	229	225	250	240	400	227

Note: Table may not add due to interactions between disabilities and rounding. The EPC expenses and assessed expenses are total spending per capita. The amounts for each disability are redistributions from an EPC assessment.

Source: Commission calculation.

INFRASTRUCTURE ASSESSMENT

- 37 States require infrastructure to support service delivery. State infrastructure requirements are assessed in the Investment category. The main driver of investment in post-secondary education related infrastructure is growth in the assessed government funded contact hours, assessed on the basis of the population by age, Indigeneity and remoteness. Cost weights for Indigenous students, remote students, and wage costs are assumed to affect the recurrent costs of post-secondary education, but not the capital requirements to provide it.
- 38 Interstate differences in construction costs are also recognised.
- 39 For a description of the Investment assessment, see Attachment 21 — Investment.

ASSESSMENT ISSUES

- 40 The 2015 Review assessments provided the starting point for 2020 methodology review. In April 2018, Commission staff released a draft assessment paper setting out staff proposals for the Post-secondary education category. States provided submissions on the proposals. The staff proposals and State submissions are available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).
- 41 The main assessment issues for the category were:
- the application of the new remoteness cost gradient in the assessment
 - treatment of user charges
 - the inclusion of industry mix and public service provision as potential disabilities.
- 42 States were broadly supportive of the staff proposals.
- 43 The following sections present the main issues for the Post-secondary education category and address issues raised in State submissions.⁵

Remoteness cost gradient

- 44 The difference in the cost of providing services to different parts of a State can affect State expenses. The Commission observes that it is more costly to deliver services to students attending remote institutes. Most States apply remoteness cost weights to the subsidies for courses delivered in regional areas. For the 2015 Review this was reflected in the assessment by applying a remoteness cost weight of 38% to remote

⁵ State submissions often include significant detail and supporting evidence. In this attachment, the Commission responds to the arguments and evidence States presented in their submissions. For the full detail of State submissions, see the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

and very remote hours.⁶ The cost weight was based on the general regional costs gradient, which was based on estimates of the cost of providing school and police services in different regions.

- 45 For the 2020 Review the Commission have developed a category specific regional cost gradient for Post-secondary education. The gradient is based on the location at which the course is provided. The regional costs are based on regional cost weights in States' funding formulae and NCVER data for hours delivered, as shown in Table 9.

Table 9 Post-secondary education regional cost weight, 2013 to 2016

	NSW	VIC	QLD	WA	SA	TAS	ACT	NT	Average
Major cities	1.00	1.01	1.00	1.00	1.00	—	1.00	—	1.00
Inner regional	1.10	1.10	1.14	1.11	1.00	1.10	1.00	—	1.10
Outer regional	1.10	1.10	1.17	1.33	1.12	1.10	—	1.19	1.16
Remote	1.20	1.10	1.52	1.97	1.23	1.10	—	1.25	1.62
Very remote	1.20	—	1.93	1.96	1.36	—	—	1.76	1.87

Note: Tasmania and the Northern Territory cost weights are a combination of the State's cost weight and the national average of the inner and outer regional cost weights respectively. Geelong attracts a regional weight, but is classified as part of the Major cities region of Victoria. The average for major cities is therefore above 1 in Victoria. A similar issue leads outer regional Northern Territory to have a regional weight above the national average value of 1.16 set for Darwin.

Source: Commission calculation based on State data.

- 46 As the data reflect the specific effects of remoteness for post-secondary education, the Commission has used a full remoteness disaggregation in the 2020 Review. In the 2015 Review, the regional cost gradient distinguished between remote and non-remote only.
- 47 Victoria noted that the data on costs relate to where the service is provided; however, the cost weights are applied to State population. To the extent to which people commute from more remote residences to less remote VET institutions, the assessment would overstate the cost of remoteness for States. This issue is considered in Attachment 25 — Geography. The Commission has not made an adjustment in this category, because the effect would be minimal.

Treatment of user charges

- 48 In the 2015 Review, user charges were netted off, and net expenses were assessed. In this review, the Commission considered whether to change this treatment and only net off fee for service income.

⁶ In the 2015 Review, the general gradient was discounted to reflect uncertainty in the extent to which schools and police gradients applied to other services, and because differences in the service delivery models for other services meant the extent of regional influences was likely to be less than in schools or police.

- 49 Fees paid by full-fee-paying students are deducted from State expenses before making an assessment because this revenue meets State spending on non-subsidised training. As such, State provision of commercial VET services has no impact on State fiscal capacities. Removing these expenses ensures the usage (government subsidised training hours) and spending data are comparable.
- 50 Conceptually, there is no case for netting off fees from students participating in government subsidised training courses. States with an above average need for spending on subsidised VET services are not necessarily those with the greatest capacity to generate revenue because some of the high cost groups (Indigenous and low socio-economic status) are eligible for fee concessions or exemptions.
- 51 The Commission considers that the conceptually appropriate treatment for student fees and other income is equal per capita (EPC), as it has no basis for a differential assessment reflecting each State's capacity to raise this revenue. However, the simplest treatment is to include this income with fee for services income and net it off the category. The biggest difference between these two treatments in the 2019 Update would have been to increase the Northern Territory's assessed needs by \$3 per capita. As this is not material, the Commission's assessment guidelines require it to choose the simpler approach.
- 52 All States supported the Commission considering this issue except Victoria, which supported the retention of the current approach of netting off all expenses.

Course mix

- 53 The subsidies States provide for courses are based on a range of factors including staffing costs, equipment and facility costs, qualification level and the level of public benefit. This gives rise to different subsidies based on field of study. The mix of field of study varies between States. The Commission accepts the conceptual case that a State's industrial profile could affect the fields of study that students choose and that this could cost different amounts in different States.
- 54 South Australia advocated for the Commission considering a course mix disability, claiming that demand was the primary driver of course mix, and that policy differences between States would have a relatively minor effect.
- 55 NCVET have data on the mix of courses provided in each State. Similar patterns of enrolment occur in all States, although there are differences, with the ACT having the biggest difference from the average course mix profile. If the courses where the ACT had above average use were, for example, 70% more expensive than the courses where it had a below average use (or the below average share courses were 70% more expensive), an assessment could be material. For other States, where the use profile is closer to the national average, the difference in price would have to be greater.

- 56 Given the difference in cost required, it seems unlikely that a cost difference would occur that coincidentally corresponded with the course structures of any particular State. As such, it seems unlikely an assessment would be material.

Qualification level

- 57 There is considerable variation in the subsidies provided for different qualification level courses (for example, certificate I, II, etc.) with lower level qualifications often attracting higher subsidies. In addition, the Commission observes that certain SDC groups are more likely to enrol in lower level qualification courses. This suggests there may be a case for including a qualification cost weight in the assessment.
- 58 States supported the Commission exploring differences in subsidies for different qualification levels. Victoria stated that differences in costs between qualifications would reflect differences in the contact hours required, and differences in the socio-demographic profile of students as well as differences in the cost driven by qualification level. The ACT was concerned that trade and non-trade qualifications attract different subsidies and that different subsidies for different courses could drive apparent differences in subsidies between qualification level.
- 59 Investigating this as a potential disability, the Commission has found no evidence of State policies of different levels of subsidy per hour for different qualification levels. Differences may exist because certain qualifications are more commonly provided to Indigenous students, or in remote areas, or because certain subjects within a qualification receive higher or lower subsidies (reflecting the cost of providing each course, or their public interest value).
- 60 Evidence from NSW suggests that the average cost of a diploma is about four times the average cost of a certificate I, which approximately reflects the relative contact hours.
- 61 The Commission has not identified a data source that would enable cost weights for different qualification levels without double counting other disabilities that are assessed. Even if such a data source were identified it seems unlikely that an adjustment would be material.

Public/private provision

- 62 Some States provide higher subsidies to public providers than private providers of VET services, while other States do not. There may be some variation in the average subsidy paid for comparable courses between public and private providers. As some States have more private provision than others, an economic environment disability may be warranted. The Commission has not made an assessment because it considers that the differences are likely small and because the mix is policy influenced.

- 63 While the economic environment, or level of private provision of services, affects the Schools and Health assessments, the Commission considers that the level of policy influence on private provision in those fields is relatively minor. It considers the differences in those fields are driven by the socio-demographic drivers of demand for private schools, and decisions by the private sector on where to establish private health services.
- 64 In the post-secondary field, however, most differences reflect State policy decisions that encouraged or discouraged private RTOs to offer courses. If an economic environment disability were to be recognised, in addition to observing that subsidies on average were greater (or less) to private RTOs than to public RTOs, the Commission would need to be able to determine what the respective public/private RTO splits under average policy. There are no clear common policy approaches nor data upon which this split could be made.
- 65 In any case, the Commission has not identified any data to suggest that there are subsidy differences between private and public RTOs. All States supported this position.

OTHER ISSUES CONSIDERED BY THE COMMISSION

- 66 There were no additional issues identified by States for consideration by the Commission, relating either to the method for measuring existing disabilities nor requests for new disabilities, other than those already addressed.

REDISTRIBUTION FROM AN EPC ASSESSMENT

- 67 Table 10 shows the extent to which the assessment for this category differs from an EPC assessment of post-secondary education expenses. States with a positive redistribution are assessed to have above average spending requirements and States with a negative redistribution are assessed to have below average spending requirements. In per capita terms, the largest redistribution affects the Northern Territory.

Table 10 **Redistribution from an EPC assessment, Post-secondary education, 2017-18**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	-19	-70	28	4	-3	12	5	43	92
\$ per capita	-2	-11	6	2	-2	22	13	172	4

Note: The redistribution is the difference from an EPC assessment of category expenses.

Source: Commission calculation.

- 68 The main reasons for these redistributions are the differences between State SDC profiles.
- 69 The main reasons for the redistributions for each State are:
- There are redistributions away from New South Wales, Victoria, and the ACT primarily due to below average shares of remote and Indigenous students. In the case of the ACT, this is more than offset by the additional costs of providing VET services to New South Wales students as well as higher wage costs.
 - There are redistributions towards Queensland, Western Australia and the Northern Territory, particularly due to above average shares of remote and Indigenous students. In Western Australia’s case, this is partially offset by lower wage costs (although Western Australia has had higher than average wage costs in earlier assessment years).
 - The redistribution towards South Australia and Tasmania is primarily due to their high shares of low SES people. In South Australia’s case, this is more than offset by lower wage costs.
- 70 Table 11 provides a summary of the main disabilities contributing to the redistribution from an EPC assessment for this category.

Table 11 Major reasons for the redistribution, Post-secondary education, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Socio-demographic composition	-13	-75	32	7	6	15	-13	40	100
Cross-border	-16	0	0	0	0	0	16	0	16
Wage costs	9	5	-4	-4	-9	-3	4	2	20
Total	-19	-70	28	4	-3	12	5	43	92

Note: The redistributions from an EPC assessment are illustrative. Disabilities may not add due to rounding.

Source: Commission calculation.

UPDATING THE ASSESSMENT

- 71 As required by the terms of reference, the Commission will incorporate the latest available data in the assessment during the annual updates. This will allow the assessment to reflect changes in State circumstances.
- The following data will be updated annually.
 - Government funded contact hours from NCVET, and the population to which it applies.
 - Cross-border government funded contact hours from NCVET.

- Some of the assessment data are not readily available on an annual basis, or remain stable over time. These data will not be updated during the review period.
 - State cost data for the Indigenous and remoteness cost weights.

OUTSTANDING ISSUES

72 From the Commission’s perspective, there are no outstanding issues for this assessment.

FURTHER CONSULTATION

73 Before the release of the final report by 28 February 2020, there will be opportunities for consultation on this assessment. For further information about this category, please contact Jacob Savage on Jacob.Savage@cgc.gov.au.

ATTACHMENT 12

HEALTH

Summary of proposed changes to the 2015 Review methodology

- A block funded hospital loading is applied to the national weighted activity unit (NWAU) data for block funded hospitals in the admitted patients (AP), emergency departments (ED) and community health components to ensure appropriate recognition of regional and service delivery scale (SDS) costs.
- The regional costs factor for the non-admitted patients (NAP) assessment uses the Independent Hospital Pricing Authority's (IHPA) data. An SDS factor based on ED data has been included.
- The 25% discounts applied to the socio-demographic composition (SDC) assessment and non-State sector adjustment for community health have been removed.
- The SDC assessments for all components (except non-hospital patient transport) disaggregate remote and very remote populations.
- The assessment of Indigenous grants uses Australian Institute of Health and Welfare (AIHW) data instead of proxy data. A regional costs factor based on IHPA data is applied.
- A cross-border capital stock factor has been included in the health infrastructure assessment.
- The ACT's cross-border allowance for community health has been reduced.
- Annual expenditure data for ED and NAP services from the National Hospital Cost Data Collection have been used to split outpatient expenses. This replaces the previous 50:50 split.
- The non-State sector substitutability levels for NAP and community health are 35% and 60% respectively.
- The non-State sector indicator for NAP is based on bulk billed medical operations and specialist services.
- Expenses for pharmaceuticals, medical aids and appliances and health administration not elsewhere classified are included in the admitted patients component.

- 1 This attachment contains the Commission’s draft proposals for the Health category following consultation with the Commonwealth and States.

SERVICE OVERVIEW

- 2 State expenses on Health were \$64.1 billion in 2017-18, representing 29.6% of total State expenses (Table 1). State spending on this function comprises expenses for:
 - admitted patient services
 - emergency departments
 - non-admitted patient services
 - community and public health services
 - non-hospital patient transport.

Table 1 State expenses on Health by State, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Total expenses (\$m)	18 110	14 773	14 561	7 868	4 747	1 553	1 175	1 332	64 117
Total expenses (\$pc)	2 286	2 313	2 933	3 045	2 747	2 959	2 822	5 398	2 588
Proportion of total operating expenses (%)	27.1	29.5	32.6	31.4	31.0	32.0	28.9	24.7	29.6

Note: Expenses shown on a net basis.

Source: Commission calculation using State budget data.

- 3 Table 2 shows the share of State expenses on health from 2014-15 to 2017-18.

Table 2 State expenses on Health, 2014-15 to 2017-18

	2014-15	2015-16	2016-17	2017-18
Total expenses (\$m)	52 944	56 579	60 259	64 117
Proportion of total operating expenses (%)	28.5	29.2	29.7	29.6

Note: Expenses shown on a net basis.

Source: Commission calculation using ABS Government Finance Statistics (GFS) and State budget data.

- 4 User charges were \$8.1 billion in 2017-18 (Table 3) and mainly comprise private patient hospital fees. In this category, user charges are deducted from total category expenses so that the health assessment only applies to net category expenses.

Table 3 Health user charges, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Revenue (\$m)	2 592	2 006	1 397	671	944	199	222	78	8 110
Revenue (\$pc)	327	314	281	260	546	379	532	317	327

Note: User charges refer to revenue from the sale of goods/services in GFS ETF 112.

Source: Commission calculation using ABS GFS and State budget data.

State roles and responsibilities

- 5 States provide public hospital (admitted patients, non-admitted patients and emergency departments) and community health services. The States own and manage public hospitals, undertaking policy, planning, purchasing and the oversight of the delivery of public hospital services. Hospitals are the largest component in the Health expense category.
- 6 States are obligated to provide these services to the whole population and access depends on clinical need. This means they provide a broad range of hospital services free of charge throughout each State through a diverse range of public hospitals, in various locations, with a variety of services. For example, referral hospitals provide more complex types of hospital care, such as for major trauma and surgery, organ transplants and specialist outpatient services. These tend to be located in major cities. In contrast, small hospitals provide a more limited range of services and tend to be located in regional and remote areas. For more complex procedures, patients tend to present, or are referred to, larger hospitals.
- 7 The majority of admitted patient services in public hospitals are for acute care. Both Commonwealth and State governments fund admitted patient services, non-admitted patient services and emergency departments. About 20% of total health expenditure on hospitals are funded by non-government sources (for example, by private health insurers).¹
- 8 The operational management for all public hospitals is devolved to Local Hospital Networks (legal entities established under State legislation), which are organisations that provide public hospital services in accordance with the *National Health Reform Agreement* (NHRA).² There are consistent funding and service delivery systems for admitted patient services across all States, although the arrangements for activity-based funding differ.
- 9 Many admitted patient services provided in public hospitals are also provided by the non-State sector. However, the two sectors vary both in the focus of service provision and by patient usage patterns. For example, private hospitals perform a higher proportion of non-emergency or sub-acute surgical activities.
- 10 States are also responsible for delivering community health (the second largest component in Health), which covers a wide range of heterogeneous services including

¹ Australian Institute of Health and Welfare (AIHW), 2017, *Health expenditure Australia 2016-17*, cat. no. HWE 74, Table A.3.

² All States and the Commonwealth entered into the *National Health Reform Agreement* in August 2011. It sets out the shared intention of the Commonwealth and State governments to work in partnership to improve health outcomes for all Australians and ensure the sustainability of the Australian health system. A new agreement was signed in 2017.

community health centre services, community mental health services, public health services, and health research.

- 11 Community health centres tend to focus on prevention and early intervention and are often the first point of contact with the health system. These are designed to take the pressure off the more costly acute health care system. Community health centres vary significantly in size.
- 12 State governments directly provide and/or fund a proportion of total community health services. They may provide the services directly, or fund non-government organisations to provide services on their behalf. The non-State sector is a major provider of community health services but the extent of non-State sector activity differs between types of services and across States.

Commonwealth roles and responsibilities

- 13 The Commonwealth has a central role in funding primary health service provision, mostly through Medicare. It also defrays individuals' out-of-pocket expenses through the Private Health Insurance Rebate. Some of these outlays reduce States' expenses on health.
- 14 The Commonwealth also provides substantial funding for recurrent public hospital services through the successor to the NHRA, the *Heads of Agreement for Public Hospitals Funding* (HAPHF), which covers the period June 2017 to June 2020. This agreement preserved key features of the NHRA funding system, particularly that the Commonwealth funds a portion of public hospital services.
- 15 The Independent Hospital Pricing Authority (IHPA) calculates the National Efficient Price (NEP) of hospital services, which is the major determinant of the level of Commonwealth funding for public hospitals. IHPA sets the funding levels by category of hospital. In 2018-19, there are 290 hospitals funded using its Activity Based Funding (ABF) model. There are 406 smaller hospitals (such as small rural hospitals), which are block funded (BF). BF hospitals receive a flat amount to run their operations. To determine the Commonwealth's contribution, IHPA estimates:
 - a National Efficient Price for health care services provided by public hospitals where the services are funded on an activity basis
 - a National Efficient Cost for health care services provided by public hospitals where the services are block funded.

- 16 Under the HAPHF, the Commonwealth has agreed to fund 45% of the growth in public hospital services expenses, with the Commonwealth’s contribution capped at a growth rate of 6.5% per year from 2017 to 2020.³
- 17 In addition to providing funding for hospital operations through the NHRA, the Commonwealth provides other funding through National Partnership Payments (NPPs) to support hospital services including the development of health-related infrastructure in the States. Table 4 shows the main Commonwealth payments to the States for Health in 2017-18.

Table 4 Commonwealth payments to the States for Health, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
National Health Reform — Hospital services (\$m)	6 022	4 878	4 180	2 137	1 319	427	313	273	19 550
National Health Reform — Public health (\$m)	126	99	77	40	27	8	5	4	387
Treating more public dental patients (\$m)	43	34	0	12	12	4	0	2	106
Health and Substance Abuse program grants — Indigenous purposes (\$m)	5	1	5	8	4	1	0	42	66
Other NPPs (\$m)	28	29	25	10	7	12	2	27	142
Total (\$m)	6 225	5 040	4 287	2 208	1 369	454	321	348	20 251
Total (\$pc)	786	789	864	855	792	864	770	1 411	818

Note: The table shows major payments only. Commonwealth own purpose expenses (COPEs) are not included. Payments that the Commission treats as ‘no impact’ are included in the table.

Source: Commonwealth *Final Budget Outcome, 2017-18*.

- 18 The complete list of Commonwealth payments and their treatment is available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).⁴

³ The Administrator of the National Health Funding Pool, with the support of the National Health Funding Body, is responsible for the oversight and administration of the health funding pool according to the NHRA and relevant legislation.

⁴ Most Commonwealth payments to the States affect the grant distribution but some do not. The Commission refers to payments that affect the grant distribution as ‘impact’ payments. For more information, see Attachment 2 — Commonwealth payments.

CATEGORY STRUCTURE

- 19 The assessment of the Health category is undertaken in five components:
 - admitted patient (AP) services
 - emergency departments (ED)
 - non-admitted patient (NAP) services
 - community and public health services
 - non-hospital patient transport.
- 20 Components allow different disability assessments to apply to sub-functions.
- 21 Table 5 shows the Health category's assessment structure, the size of each component and the disabilities that apply.

Table 5 Category structure, Health 2017-18

Component	Component expense	Disability	Influence measured by disability
	\$m		
Admitted patients	44 012	Socio-demographic composition (SDC) (a)	Recognises that Indigenous status and low socio-economic status (SES) of State populations, age and where people live affect the use and cost of services.
		Non-State sector	Recognises the impact of the non-State sector on 15% of spending on AP services.
		Wage costs	Recognises the differences in wage costs between States.
Emergency departments	4 756	SDC (a)	Recognises that Indigenous status and low SES of State populations, age and where people live affect the use and cost of services.
		Non-State sector	Recognises the impact of the non-State sector on 15% of spending on ED services.
		Wage costs	Recognises the differences in wage costs between States.
Non-admitted patients	5 364	SDC (a)	Recognises that Indigenous status and low SES of State populations, age and where people live affect the use and cost of services.
		Non-State sector	Recognises the impact of the non-State sector on 35% of spending on NAP services.
		Wage costs	Recognises the differences in wage costs between States.
Community and public health services	9 361	SDC (a)	Recognises that Indigenous status and low SES of State populations, age and where people live affect the use and cost of services.
		Non-State sector	Recognises the impact of the non-State sector on 60% of spending on community and public health services.
		IAHP adjustment	Recognises the impact of Commonwealth grants to Indigenous community health organisations.
		Cross-border	Recognises the net cost to the ACT of providing services to New South Wales residents.
		Wage costs	Recognises the differences in wage costs between States.
Non-hospital patient transport	624	SDC	Recognises the additional costs of providing non-hospital patient transport to people in remote regions.
		Wage costs	Recognises the differences in wage costs between States.

(a) Regional and service delivery scale (SDS) costs are included in these SDC assessments.

Source: Commission calculation using State budget data.

Category and component expenses

- 22 The main data sources for calculating category and component expenses are ABS Government Financial Statistics (GFS) and State budget data.⁵ National Hospital Cost Data Collection (NHCCD) data from IHPA are used to split GFS outpatient expenses between the non-admitted patients and emergency department components. State provided data are used to determine the proportion of patient transport expenses that relate to non-hospital patient transport (for example aero-medical ambulance and patient assisted travel schemes).⁶

ASSESSMENT APPROACH

ADMITTED PATIENTS

- 23 Expenses for this component include State expenses on AP services in public hospitals, including land ambulance transport. It also includes expenses for pharmaceuticals, medical aids and appliances and health administration not elsewhere classified. It accounts for nearly 70% of State expenses, of which the majority are for acute care admissions. Expenses associated with outpatient services (for example, emergency departments and other non-admitted patient services) are dealt with in other components.

Socio-demographic composition

- 24 The assessment recognises that the socio-demographic composition (SDC) of the population, including age, Indigenous status, remoteness and socio-economic status (SES), affects the use and cost of AP services. The SDC assessment uses national weighted activity unit (NWAU)⁷ data sourced from IHPA to recognise the impact of different SDC characteristics. These are outlined below.
- 25 IHPA costs all hospital activity in Australia and expresses these costs as NWAUs. A NWAU is a measure of health service activity expressed as a common unit. The average hospital service across Australia is worth one NWAU. To identify the cost of each procedure, IHPA weights NWAUs with cost weightings. The result is that the most intensive, expensive and lengthy activities are worth multiple NWAUs and, the

⁵ Unless otherwise stated, category and component expenses for the first two assessment years are sourced from ABS GFS. States provide data for the most recent assessment year because GFS data are not available in time for the annual update.

⁶ Land ambulance transport expenses are included in the admitted patients component.

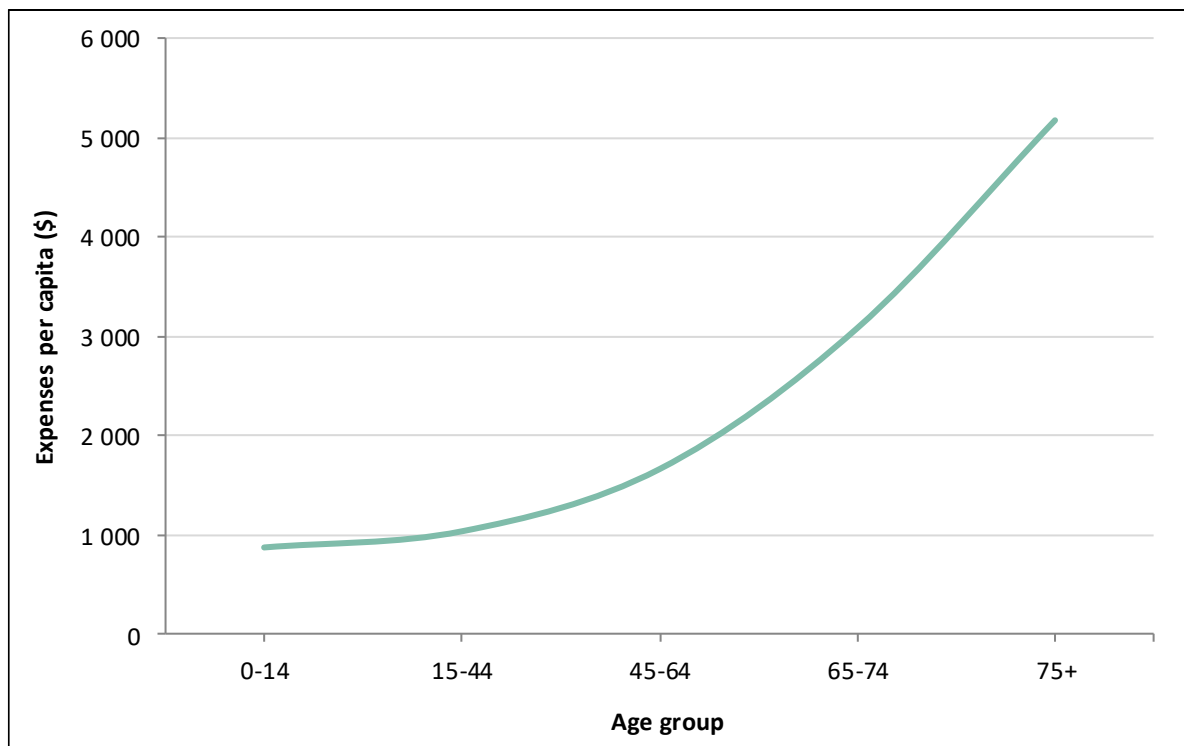
⁷ IHPA, *Technical Specifications 2018-19 National Pricing Model*, available at the [IHPA website](https://www.iHPA.gov.au). (<https://www.iHPA.gov.au>).

simplest and least expensive are worth fractions of an NWAU. The NWAU data reflect the medical costs of providing different procedures and other factors (for example, patient remoteness and Indigenous status) that affect the overall cost of each hospital service. It covers the activity of both activity-based funded (ABF) hospitals and block funded hospitals, which tend to be small and more remote. IHPA uses data from all public hospital episodes (there were 5.7 million in 2016-17) to derive the NWAU cost weightings.

Age

- 26 Admitted patient expenses vary significantly and rise sharply by age. On average, admitted patient expenses of the 75+ age group are over three times those of the 45-64 age group (see Figure 1). This reflects older persons being more likely to have age-onset diseases, chronic diseases and cancers. As in the 2015 Review, five age groups are used:
- 0-14 years, capturing neo-natal and paediatric care costs and costs associated with childhood diseases
 - 15-44 years, reflecting the impact of women in their child-bearing years along with higher rates of major trauma for people in their early twenties
 - 45-64 years, capturing early chronic conditions and the early-onset effects of cancers
 - 65-74 years, capturing chronic diseases and age-onset diseases
 - 75+ years, reflecting the range of diseases of the old and very old.
- 27 As the population is ageing, the Commission investigated if it would be material to split the 75+ age group into 75-84 and 85+ groupings. The materiality test indicated that splitting the 75+ age group would redistribute less than \$5 per capita for any State. The data showed that the relatively small number of people aged over 85 years more than offsets their higher per capita costs.

Figure 1 Admitted patient expenses per capita by age, 2017-18



Source: IHPA NWAU data.

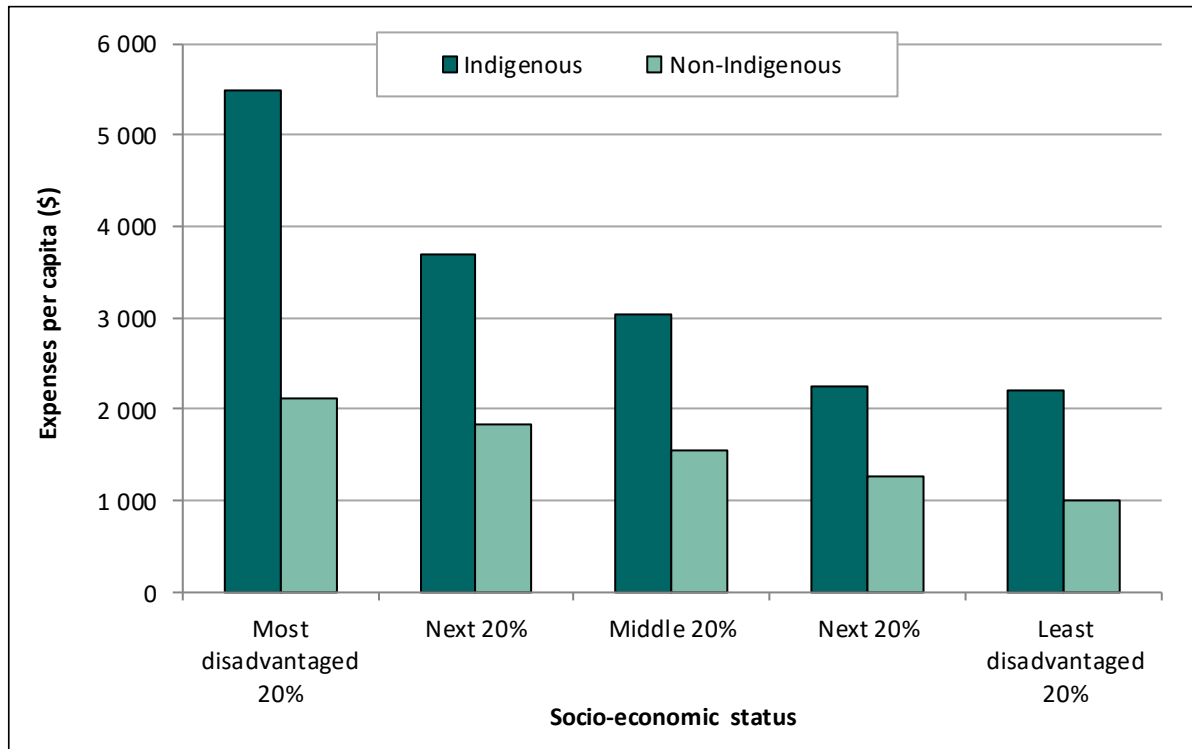
Indigenous status and socio-economic status

- 28 Admitted patient expenses vary significantly for Indigenous and non-Indigenous people. Indigenous health spending per capita in public hospitals is around twice that of non-Indigenous people, reflecting their poorer health status on average. In relation to socio-economic status (SES), disadvantaged patients use public hospital services more than the least disadvantaged, as the disadvantaged’s health status tends to be lower. Figure 2 shows that spending on admitted patient services varies substantially for Indigenous and non-Indigenous people and by SES.
- 29 To recognise the influence of Indigeneity and SES on admitted patient expenses, the Commission uses separate measures of SES for Indigenous and non-Indigenous people. For Indigenous people, the Indigenous Relative Socio-Economic Outcomes (IRSEO)⁸ index is used and for the rest of the population, the Non-Indigenous

⁸ IRSEO was developed by the Centre for Aboriginal Economic and Population Research (CAEPR) at the Australian National University (see the [CAEPR website](http://caepr.cass.anu.edu.au/), <http://caepr.cass.anu.edu.au/>).

Socio-Economic Index for Areas (NISEIFA).⁹ This is the same approach as taken in the 2015 Review.

Figure 2 Admitted patient expenses per capita, by SES quintile and Indigenous status, 2017-18



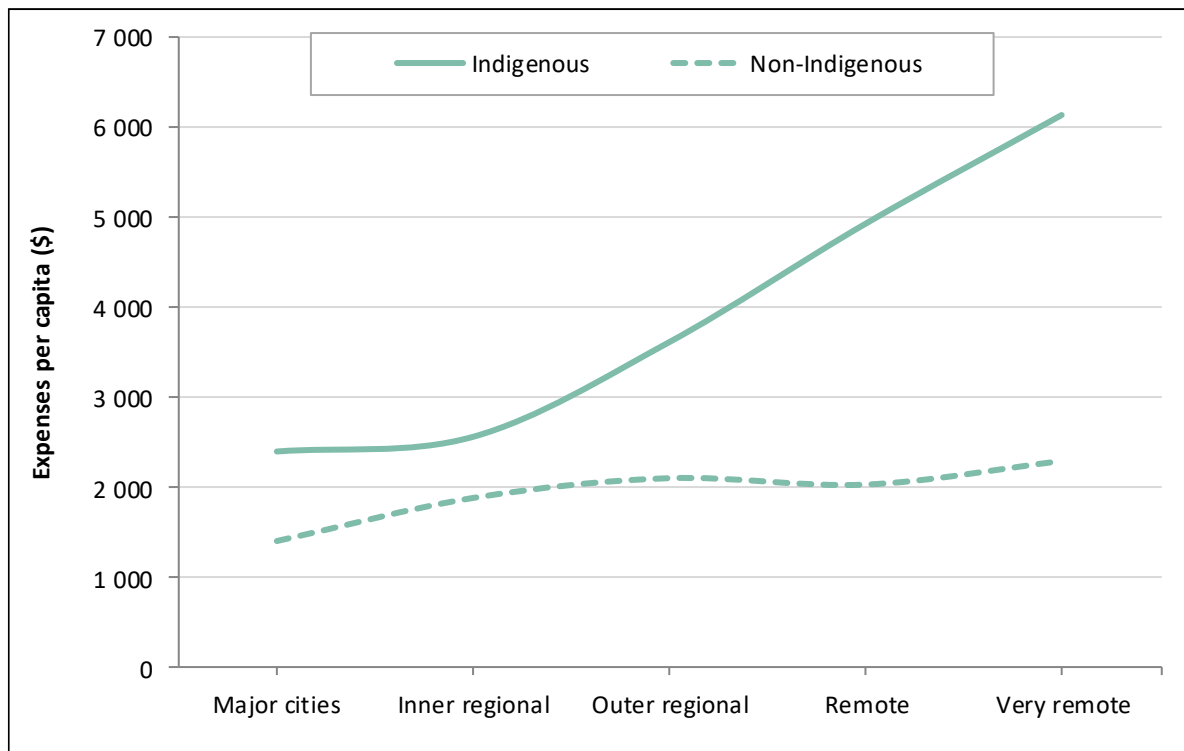
Source: IHPA NWAU data by IRSEO/NISEIFA.

Remoteness

30 Differences in the cost of providing services to different regions affect States' health expenses. For admitted patients, spending per capita is higher in more remote areas, as can be seen in Figure 3. This reflects a mix of more remote patients having poorer health status, thus being more expensive to treat, the higher costs in more remote areas, and that more remote hospitals face greater service delivery scale (SDS) disabilities, since they tend to be much smaller.

⁹ The ABS developed NISEIFA for the Commission. This index uses the same indicators as the ABS' *Socio-Economic Indexes for Areas (SEIFA)* Index of relative socio-economic disadvantage.

Figure 3 Admitted patient expenses per capita, by remoteness and Indigenous status, 2017-18



Source: IHPA NWAU data by ABS remoteness area.

31 To reflect these disabilities, NWAU data sourced from IHPA are used. Until 2017-18, when costing hospital activity, IHPA included a remoteness loading (or adjustment) only for the patient’s residence, to reflect the fact that more remote patients are more expensive to service on average.¹⁰ In 2018-19, IHPA added a new adjustment to reflect the additional costs in delivering admitted patient services in remote and very remote locations. Table 6 summarises the evolution of these patient and hospital loadings since 2015-16. The assessment uses IHPA’s costings to measure the higher costs associated with remote service use and cost.

¹⁰ However, there are a small number of cases where the hospital is unable to identify the residency location of the patient. In these cases, the location of the hospital is used as a proxy.

Table 6 IHPA patient and hospital remoteness loadings

		AP patient remoteness loading	AP hospital remoteness loading	AP total loading (a)	ED patient remoteness loading
		%	%	%	%
2015-16	Outer regional	8		8	
	Remote	16		16	
	Very remote	22		22	
2016-17	Outer regional	8		8	
	Remote	18		18	
	Very remote	23		23	
2017-18	Outer regional	8		8	
	Remote	20		20	
	Very remote	25		25	
2018-19	Outer regional	8		8	
	Remote	25	8	35	22
	Very remote	29	12	44	22

(a) The total loading is calculated based on patient and hospital loadings with a multiplicative effect. For example, 44% = 100% - (129% x 112%)/100.

Source: Commission calculation from the *National Efficient Price Determination* 2015-16 to 2018-19, by the Independent Health Pricing Authority. See the [IHPA website](http://www.ihpa.gov.au), (<http://www.ihpa.gov.au>).

Service delivery scale

- 32 States face different service delivery costs in certain parts of the State where the small size and dispersed nature of communities lead to above average staffing ratios.
- 33 While NWAU data for ABF hospitals capture all remoteness costs for these hospitals, NWAU data for BF hospitals are adjusted to capture regional and service delivery scale costs that the NWAU data are reflecting. The adjustments, which are derived from IHPA NWAU data for ABF and BF hospitals, are necessary because of the different funding arrangements for BF hospitals. Table 7 shows the BF hospital adjustments for 2017-18.

Table 7 Regional and service delivery scale cost adjustments for block funded hospital NWAU, by hospital remoteness, 2017-18

	2017-18
Major cities	1.00
Inner regional	1.38
Outer regional	1.46
Remote	1.63
Very remote	2.00

Note: These reflect regional and SDS cost adjustments, applied to AP and ED block funded NWAU.

Source: Commission calculation using IHPA cost weights for block funded and activity based funded hospitals, the *National Efficient Cost Determination* and *National Efficient Price Determination* for 2017-18 and IHPA unit record data on block funded hospitals.

Calculating SDC assessed expenses

34 The Commission considers that the features of the socio-demographic composition that drive cost differences are Indigenous status, SES, remoteness and age. Those variables are classified as shown in Table 8.

Table 8 Proposed SDC breakdown

Indigenous status	Socio-economic status	ABS remoteness area	Age
Indigenous	Bottom quintile	Major cities	0 to 14
Non-Indigenous	Middle 3 quintiles	Inner regional	15 to 44
		Outer regional	45 to 64
	Top quintile	Remote	65 to 74
		Very remote	75+

Note: Due to the data unreliability, remote and very remote areas are not disaggregated by IRSEO or NISEIFA.

Source: Commission decision.

35 The SDC assessed expenses for each State for the admitted patients component are derived by:

- allocating the national aggregate net spending on AP to each of the population groups in Table 8 on the basis of the adjusted NWAU data sourced from IHPA
- dividing the total spending attributable to each population group by the national population in that group (Table 9 provides a sample of the national spending per capita of providing admitted patient services to various population groups)
- national average spending per capita for each population group is then multiplied by the number of people in the corresponding SDC group in each State
- assessed spending for each population group is summed to give the total assessed spending for each State.

Table 9 Sample matrix of national per capita spending on non-Indigenous admitted patients, 2017-18

Geography	Age	Spending
		\$pc
1.Major cities 1.Low SES 20%	0-14	1 191
1.Major cities 1.Low SES 20%	15-44	1 306
1.Major cities 1.Low SES 20%	45-64	2 227
1.Major cities 1.Low SES 20%	65-74	3 858
1.Major cities 1.Low SES 20%	75+	5 079
1.Major cities 2.Middle SES 60%	0-14	910
1.Major cities 2.Middle SES 60%	15-44	970
1.Major cities 2.Middle SES 60%	45-64	1 660
1.Major cities 2.Middle SES 60%	65-74	3 220
1.Major cities 2.Middle SES 60%	75+	5 572
1.Major cities 3.High SES 20%	0-14	615
1.Major cities 3.High SES 20%	15-44	736
1.Major cities 3.High SES 20%	45-64	1 006
1.Major cities 3.High SES 20%	65-74	2 176
1.Major cities 3.High SES 20%	75+	5 100

Note: The sample matrix shows the per capita costs for non-Indigenous people for one remoteness region. Other regions are inner regional, outer regional, remote and very remote regions. The Indigenous disaggregation is the same as that for non-Indigenous people.

Source: Commission calculation using unpublished IHPA data, 2017-18, ABS ERP 2017-18 and GFS expense data for 2017-18.

Non-state sector

36 The provision of admitted patient services by the private sector influences the level of State services. The assessment recognises the influence of the non-State sector in each State through an adjustment to SDC assessed expenses. The non-State sector adjustment is derived using data on private admitted services by privately insured patients sourced from the Australian Institute of Health and Welfare (AIHW) and the Australian Prudential Regulation Authority (APRA). The proportion of State expenses considered substitutable is 15%, for more information see the supplementary information to the draft report, available on the [Commission website](https://cgc.gov.au/), (<https://cgc.gov.au/>).

Wage costs

37 Differences in wage costs between States have a differential effect on the cost of providing AP services. The assessment uses the general method for measuring the influence of wage costs for AP. For a description of the method, see Attachment 24 — Wage costs.

Component calculations

38 Table 10 shows the calculation of total assessed expenses for the admitted patients component in 2017-18.

Table 10 Illustrative assessment, admitted patients component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SDC assessed (\$m)	13 907	10 697	9 115	4 500	3 361	1 186	560	685	44 012
Non-State sector (\$m)	40	99	-159	13	-11	-21	43	-4	0
Adjusted assessed (\$m)	13 947	10 796	8 956	4 513	3 351	1 165	603	681	44 012
Wage costs factor	1.006	1.004	0.996	0.993	0.974	0.970	1.050	1.031	1.000
Assessed expenses (\$m)	14 037	10 841	8 922	4 483	3 264	1 130	633	702	44 012
Assessed expenses (\$pc)	1 772	1 698	1 797	1 735	1 889	2 153	1 521	2 846	1 777

Source: Commission calculation.

EMERGENCY DEPARTMENTS

- 39 State expenses on emergency department (ED) services account for about 7% of Health expenses. The SDC characteristics that affect the use and cost of AP services also affect ED services. These are age, Indigenous status, remoteness and SES.
- 40 The SDC assessment uses NWAU data sourced from IHPA, with the BF adjustment to recognise additional regional and SDS costs for BF hospitals.
- 41 A non-State sector adjustment is applied to the SDC assessed expenses to recognise that the availability of bulk billed general practitioner (GP) services affects the level of State provided services. The non-State sector adjustment is derived using Medicare data on bulk billed GP services.¹¹ The proportion of State expenses considered substitutable is 15%, for more information see the supplementary information to the draft report, available on the [Commission website](https://cgc.gov.au/), (<https://cgc.gov.au/>).
- 42 A wage costs disability is also applied.
- 43 The method of calculating SDC assessed expenses for ED services is the same as the method for AP services (see paragraph 0).

Component calculations

44 Table 11 shows the calculation of total assessed expenses for the emergency departments component in 2017-18.

¹¹ Bulk billed services are considered comparable with State provided ED services as those with income constraints are able to avail of these services at low or no cost.

Table 11 Illustrative assessment, emergency departments component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SDC assessed (\$m)	1 458	1 104	1 022	509	354	141	58	111	4 756
Non-State sector (\$m)	-13	5	-7	7	3	3	4	-1	0
Adjusted assessed \$m)	1 445	1 108	1 015	516	357	144	62	110	4 756
Wage costs factor	1.006	1.004	0.996	0.993	0.974	0.970	1.050	1.031	1.000
Assessed expenses (\$m)	1 454	1 113	1 011	513	348	139	65	114	4 756
Assessed expenses (\$pc)	184	174	204	198	201	266	156	460	192

Note: Table may not add up due to interactions between disabilities and rounding.

Source: Commission calculation.

NON-ADMITTED PATIENTS

- 45 This component includes State expenses on outpatient services other than ED services. Similar to the 2015 Review, the SDC assessment for non-admitted patient (NAP) services uses AP separations data sourced from IHPA as a proxy measure of NAP service use.¹² The separations data recognises the influence of age, Indigenous status, remoteness and SES on service use.
- 46 While the separations data recognise that remote patients use services more intensively, it does not capture the higher costs of providing services in remote areas. As the Commission considers that the service delivery arrangements for NAP services are more similar to ED (rather than AP) services, the following adjustments are applied:
- IHPA's ED remoteness adjustment of 22% (in Table 6) to non-BF patient separations in remote and very remote areas
 - regional costs and service delivery scale cost adjustments derived from IHPA ED data (in Table 12) to BF separations.

¹² The coverage and quality of IHPA's NAP NWAU data are improving. During 2020 when 2018-19 become available, the Commission will consider if the data are suitable to use in the assessment from the 2021 Update.

Table 12 Regional costs and service delivery scale cost adjustments for block funded hospital separations, by hospital remoteness, 2017-18

	2017-18
Major cities	1.00
Inner regional	1.03
Outer regional	1.11
Remote	1.15
Very remote	1.47

Note: These reflect regional costs and SDS cost adjustments, applied to block funded patient separations.

Source: Commission calculation.

47 A non-State sector adjustment is applied to SDC assessed expenses to recognise that the availability of bulk billed medical operations and specialist services affect the level of State provided services. The non-State sector adjustment is derived using Medicare data on bulk billed medical operations and specialist services. The proportion of State expenses considered substitutable is 35%, for more information see the supplementary information to the draft report, available on the [Commission website](https://cgc.gov.au/), (<https://cgc.gov.au/>).

48 A wage costs disability is also applied.

Calculating SDC assessed expenses

49 SDC assessed expenses for each State for the NAP component are derived by:

- calculating adjusted patient separations by applying the two adjustments in paragraph 46 to non-BF and BF patient separations, respectively
- allocating the national aggregate net spending on NAP to each of the population groups in Table 8 on the basis of the adjusted patient separations
- dividing the total spending attributable to each population group by the national population in that group
- national average spending per capita for each population group is then multiplied by the number of people in the corresponding SDC group in each State
- assessed spending for each population group is summed to give the total assessed spending for each State.

Component calculations

50 Table 13 shows the calculation of total assessed expenses for the non-admitted patients component in 2017-18.

Table 13 Illustrative assessment, non-admitted patients component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SDC assessed (\$m)	1 664	1 269	1 119	570	406	142	66	127	5 364
Non-State sector (\$m)	-162	-26	77	102	-3	0	8	3	0
Adjusted assessed \$m)	1 502	1 243	1 197	672	403	143	75	130	5 364
Wage costs factor	1.006	1.004	0.996	0.993	0.974	0.970	1.050	1.031	1.000
Assessed expenses (\$m)	1 512	1 248	1 192	668	393	138	78	134	5 364
Assessed expenses (\$pc)	191	195	240	259	227	264	188	542	217

Note: Table may not add up due to interactions between disabilities and rounding.

Source: Commission calculation.

COMMUNITY AND PUBLIC HEALTH

Socio-demographic composition

- 51 This component includes a variety of community and public health services provided by States in a range of settings. The SDC assessment recognises the influence of age, Indigenous status, remoteness and SES on service use and costs. In the absence of a comprehensive national dataset on the use and cost of community and public health services, the SDC assessment for this component continues to use NWAU data for ED triage categories 4 and 5.
- 52 To recognise additional regional and SDS costs for community and public health services in remote areas, two adjustments are applied:
- IHPA's ED remoteness adjustment of 22% (in Table 6) to non-BF NWAU in remote and very remote areas
 - Regional and SDS cost adjustments derived from IHPA ED data (in Table 7) to BF NWAU.
- 53 The method of calculating SDC assessed expenses for community health services is the same as the method for NAP services (see paragraph 49) although different SDS adjustments are applied.

Non-state sector

- 54 A non-State sector adjustment is applied to the SDC assessed expenses to recognise that the availability of general practitioners (GPs) affects the level of State spending on community and public health services. The non-State sector adjustment is derived using Medicare data on bulk billed GP services. The proportion of State services considered substitutable is 60%, for more information see the supplementary information to the draft report, available on the [Commission website](https://cgc.gov.au/), (<https://cgc.gov.au/>).

Grants for Indigenous community health organisations

- 55 A second non-State sector adjustment is included in this component to recognise that the availability of Commonwealth funding through the Indigenous Australians' Health Program (IAHP) for health services provided by Aboriginal Community Controlled Health Services (ACCHS) affects what States need to spend. The SDC assessment of IAHP grants is calculated using data from AIHW on fulltime equivalent (FTE) staff in ACCHS, cross-classified by remoteness and SES.
- 56 IHPA's ED remoteness adjustment of 22% is applied to the AIHW data to recognise the higher costs of service provision in remote areas, which are not captured in the AIHW data. Service delivery scale influences are captured in the AIHW FTE staff data.

Cross-border

- 57 In the 2015 Review, an estimate of the use of ACT community health services by New South Wales residents of 7% to 10% of services was used, based on community health data.¹³
- 58 Since the data the ACT has provided to support its cross-border claim in the 2020 Review is not comprehensive, the Commission intends to take a conservative approach and include a cross-border allowance reflecting a cross-border usage rate by New South Wales residents of 4%. A cross-border factor has been included in the assessment to reflect this level of cross-border use.

Wage costs

- 59 A wage costs disability is also applied.

Component calculations

- 60 Table 14 shows the calculation of total assessed expenses for the community and public health component in 2017-18.

¹³ In the 2010 Review, data provided by the ACT showed that, on a net basis, approximately 7-10% of ACT community health services are used by New South Wales residents.

Table 14 Illustrative assessment, community and public health component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SDC assessed (\$m)	2 758	2 044	2 088	1 060	696	315	103	297	9 361
Non-State sector (\$m)	-104	36	-56	56	24	20	31	-5	0
Non-State sector									
Indigenous grants (\$m)	18	-20	22	12	-15	10	-5	-21	0
Adjusted assessed (\$m)	2 672	2 060	2 054	1 128	705	345	129	270	9 361
Wage costs factor	1.006	1.004	0.996	0.993	0.974	0.970	1.050	1.031	1.000
Cross-border factor	0.998	1.000	1.000	1.000	1.000	1.000	1.046	1.000	1.000
Assessed expenses (\$m)	2 683	2 069	2 047	1 121	687	335	142	279	9 361
Assessed expenses (\$pc)	339	324	412	434	397	638	341	1 129	378

Note: Table may not add up due to interactions between disabilities and rounding.

Source: Commission calculation.

NON-HOSPITAL PATIENT TRANSPORT

61 Non-hospital patient transport expenses comprise:

- aero-medical ambulance, including the Royal Flying Doctor Service
- the Patient Assisted Travel/Transport Scheme (PATs).

62 These services are provided disproportionately to people in remote and very remote regions. A remoteness cost weight of 21%, derived from State provided data, is applied to the population in each State living in remote and very remote areas.

63 Land ambulance expenses are included in the admitted patient component because the disabilities that influence these expenses are similar to the disabilities that influence hospital-based services.

64 A wages cost disability is also applied.

Component calculations

65 Table 15 shows the calculation of total assessed expenses for the non-hospital patient transport component in 2017-18.

Table 15 Illustrative assessment, non-hospital patient transport component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SDC assessed (\$m)	156	116	136	103	52	13	8	40	624
Wage costs factor	1.006	1.004	0.996	0.993	0.974	0.970	1.050	1.031	1.000
Assessed expenses (\$m)	157	117	135	102	51	13	8	41	624
Assessed expenses (\$pc)	20	18	27	40	30	24	19	167	25

Source: Commission calculation.

CATEGORY CALCULATIONS

- 66 Table 16 brings the assessed expenses for each component together to derive the total assessed expenses for each State for the category. It shows at the component level how each disability assessment moves expenses away from an equal per capita (EPC) distribution to obtain assessed expenses.

Table 16 Illustrative category assessment, Health, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Admitted patients									
EPC	1 777	1 777	1 777	1 777	1 777	1 777	1 777	1 777	1 777
SDC	-21	-102	60	-35	168	482	-431	998	0
Non-State sector	5	15	-32	5	-6	-39	103	-16	0
Wage costs	11	7	-7	-13	-47	-54	89	55	0
Total	1 772	1 698	1 797	1 735	1 889	2 153	1 521	2 846	1 777
Emergency depts.									
EPC	192	192	192	192	192	192	192	192	192
SDC	-8	-19	14	5	13	77	-53	257	0
Non-State sector	-2	1	-1	3	2	5	9	-3	0
Wage costs	1	1	-1	-1	-5	-6	10	6	0
Total	184	174	204	198	201	266	156	460	192
Non-admitted									
EPC	217	217	217	217	217	217	217	217	217
SDC	-6	-18	9	4	18	54	-57	296	0
Non-State sector	-20	-4	16	40	-2	1	20	13	0
Wage costs	1	1	-1	-2	-6	-7	11	7	0
Total	191	195	240	259	227	264	188	542	217
Non-hospital patient transport									
EPC	25	25	25	25	25	25	25	25	25
SDC	-6	-7	2	15	5	0	-7	137	0
Wage costs	0	0	0	0	-1	-1	1	1	0
Total	20	18	27	40	30	24	19	167	25
Community health									
EPC	378	378	378	378	378	378	378	378	378
SDC	-30	-58	43	32	25	223	-130	824	0
Non-State sector	-13	6	-11	22	14	38	74	-22	0
Non-State sector Indigenous grants	2	-3	4	5	-9	19	-13	-86	0
Wage costs	2	1	-2	-3	-10	-11	19	12	0
Cross-border	-1	0	0	0	0	0	17	0	0
Total	339	324	412	434	397	638	341	1 129	378
Total assessed expenses	2 505	2 410	2 681	2 665	2 744	3 344	2 224	5 144	2 588

Note: Table may not add up due to interactions between disabilities and rounding. The EPC expenses and assessed expenses are total spending per capita. The amounts for each disability are redistributions from an EPC assessment.

Source: Commission calculation.

INFRASTRUCTURE ASSESSMENT

- 67 States require infrastructure to support service delivery. State infrastructure requirements are assessed in the Investment category. The main driver of investment in health related infrastructure is growth in the service population, which is measured in the same way as for recurrent costs. Cost weights for remote treatment, which are measured separately for non-admitted patients and community health are excluded. An adjustment is made for the capital requirements of cross-border hospital service use (see paragraphs 141-142 and Table 21).
- 68 Interstate differences in construction costs are also recognised.
- 69 For a full description of the investment assessment, see Attachment 21 — Investment.

ASSESSMENT ISSUES

- 70 The 2015 Review assessments provided the starting point for the 2020 Review. In April 2018, Commission staff released a draft assessment paper setting out staff proposals for the Health category. States provided submissions on the proposals. The staff proposals and State submissions are available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).
- 71 The main assessment issues for the category were:
- confirming the overall approach
 - confirming the substitutability levels for the non-State sector assessment
 - ensuring all remoteness and service delivery scale costs are recognised in the socio-demographic composition (SDC) assessments, based on IHPA NWAU data.

OVERALL APPROACH

The direct versus subtraction approach

- 72 The Commission intends to retain the direct method for assessing all State health expenses. The Commission considers that the direct method appropriately recognises the influence of non-State sector activity on State health spending. This approach is consistent with the scope of equalisation and with what States do. All States except Western Australia supported the current approach. The Northern Territory raised a number of issues with the non-State sector adjustments for the community and public health services component, which are addressed below.

- 73 Western Australia considered there is a conceptual flaw in how the Commission implements the direct method because it limits the influence of the non-State sector by focusing on State spending and fails to equalise health outcomes. Western Australia argued that the 2010 Review subtraction method equalised all differences in non-State service provision but the Commission abandoned this approach in the 2015 Review when it adopted the direct assessment method.¹⁴
- 74 To assist the Commission and States in examining these issues, Western Australia prepared a discussion paper setting out its views. It circulated the paper — *Non-State Services in the Health Category*, in March 2018. A number of States and Commission staff commented on the paper and Commission staff facilitated a multilateral meeting with States to discuss the issue.¹⁵
- 75 The focus of the initial discussion was on the choice of method. Western Australia favoured the 2010 Review subtraction method and was highly critical of the 2015 Review direct method. However, it became apparent that the choice of method was not the key issue because it is possible to obtain an equivalent outcome using both methods. Rather, the key issue common to either approach is the level of substitutability of non-State services. Western Australia said the problem was not the method per se but how the Commission implemented the direct method.¹⁶
- 76 The Commission adopted a direct method for all health expenses in the 2015 Review. The admitted patients assessment (62% of total State health spending) was already using the direct method, so the change affected emergency departments (ED), non-admitted patients (NAP) and community health services. The subtraction method had been developed in the 2010 Review in response to two major issues:
- a lack of administrative data on the use and cost of State provided ED, NAP and community health services
 - a large and well developed non-State sector providing State-like services in these areas.
- 77 The 2015 Review decision to move to a direct method for all health services was based on changes to the availability of data on State-provided hospital services, as well as developments in the Commission’s understanding of the different usage patterns for State and non-State sector services. This resulted in a rethink of the extent to which State and non-State sector services are substitutable.
- 78 There are two aspects to the direct method.
- A socio-demographic composition (SDC) assessment that directly assesses the use and cost of State provided health services. This assessment applies to State

¹⁴ See Western Australia’s submission to the Health draft assessment paper, page 85.

¹⁵ Tasmania and the ACT provided written comments on the paper. Commission staff also provided a written response.

¹⁶ See Western Australia’s submission on the staff discussion paper CGC 2018-05-S.

spending and assumes an average level of non-State sector activity. Importantly, the SDC assessment recognises that the average level of non-State services is lower in remote areas than in areas that are more accessible. Therefore, the high assessed per capita expenses in remote areas reflects the lower level of non-State sector activity in remote areas of all States.

- A non-State sector adjustment that recognises that the level of non-State sector activity in each State is different. The adjustment ensures that States with below average levels of non-State sector activity are able to provide the average level of services. The extent to which non-State sector activity affects State spending is determined by the proportion of State spending for which there is a substitutable non-State sector service. Substitution exists where a person has the option of accessing similar services provided by either the State or non-State sector.

79 The Commission considers that the direct method focuses on what States do while appropriately recognising the influence of the non-State sector. It provides States with the capacity to provide the average level of health services but does not equalise health services that States do not provide.

80 Western Australia said the Commission should use a ‘broadly based full equalisation approach’,¹⁷ which takes a broad view of what constitutes substitutable services and fully equalises this non-State activity. It said the direct method is complex, narrowly based, conceptually flawed and lacks transparency.

81 The key difference between the Commission and Western Australia is a constraint the Commission applies in the direct method, which limits the influence of the non-State sector to the level of State spending. Western Australia argued that this constraint is arbitrary and means that the Commission’s implementation of the direct method is conceptually flawed. The Commission acknowledges that this is the key source of difference. However, the Commission does not consider it a flaw in the assessment. The constraint reflects the Commission’s view about the extent to which non-State sector activity influences the level of State health spending and concerns about extending the scope of equalisation to cover services States do not provide.

82 Dental services provide a useful example to illustrate the main point of difference. In 2016-17, total spending on dental services in Australia was \$10.2 billion. The non-government sector contribution was \$7.8 billion,¹⁸ with the Commonwealth (\$1.5 billion) and State Governments (\$0.8 billion) spending significantly less.¹⁹ The direct method sets an upper limit of \$0.8 billion on the extent to which differences in non-State sector dental services activity can influence State spending. Under Western Australia’s approach, the upper limit would be determined by the level of

¹⁷ See Western Australia’s submission to Health draft assessment paper, page 69.

¹⁸ Mainly contributions by individuals and health insurance funds.

¹⁹ AIHW, 2018, *Health Expenditure Australia, 2016-17*, cat. no. HWE 74, Table A3.

total non-State sector spending (\$7.8 billion plus \$1.5 billion or \$9.3 billion).²⁰ The redistributions from the two approaches are very different. The outcome of Western Australia's approach would be that dental services across Australia would be fully equalised through the Horizontal Fiscal Equalisation (HFE) system.

Western Australia argued that it does not matter that States do not offer universal access to dental services. It argued HFE should equalise States' capacities to achieve desired health outcomes, regardless of who is providing the service.

Western Australia's rationale was that not fully equalising non-State sector health services has implications for State health (including hospital) spending in the long run.

- 83 The Commission considers it is necessary to constrain the influence of the non-State sector in the health assessment to avoid equalising services that States do not provide. If it is not the average policy of States to provide universal access to dental services then HFE should not equalise all dental services in Australia. Continuing with the dental example, if the Commission were to equalise all dental services in Australia, the health assessment would recognise differences between States in the availability of private dental services for middle and high SES adult populations. This population group is ineligible for State dental services.²¹ It is not appropriate for the health assessment to compensate States for differences in non-State sector activity, in the short or long run, when it is not the average policy of States to provide these services.
- 84 The dental example illustrates one factor limiting the extent to which non-State sector activity affects State service provision, that is, eligibility criteria restricting access to State services. In addition, high out-of-pocket costs for many non-State sector health services mean that some population groups rely entirely on State provided services. These groups are unaffected by the availability of non-State sector services. Also, there are some health services that the State sector does not provide, or only provides in limited circumstances – for example, orthodontics and certain elective surgeries. These services are not considered substitutable.
- 85 Furthermore, the Commission considers that for some community and public health services, what States do is focus on particular services or populations. The States tend to target disadvantaged population groups or those requiring culturally sensitive service delivery arrangements. In doing so, States are providing a unique service. States also tend to be major service providers of particular services, for example, breast cancer screening and well-baby clinics. The non-State sector provides these services, but States have tended to be the preferred service provider. Overall, the

²⁰ The non-State sector includes all sectors other than the State sector. It includes the Commonwealth and local government and the private sector.

²¹ The policy of all States is to provide dental services to children and disadvantaged adults, generally those with a Pensioner Concession Card or Health Care Card.

Commission considers that the direct method avoids overstating the influence of the non-State sector on the level of State spending.

- 86 The Commission does not agree with Western Australia that a failure to equalise virtually all non-State sector services is a conceptual flaw. It is a conceptual difference of view between the Commission and Western Australia about the scope of HFE, not a flaw in the Commission's approach. The source of the conceptual difference is a difference in views about what constitutes substitutable services. The Commission accepts that there are links between many State and non-State services, but does not agree that most non-State services are substitutable for State services. To avoid overstating the influence of the non-State sector on State budgets, the assessment should focus on State services rather than non-State sector services. The notion that long run equalisation requires full equalisation of non-State sector activity is a departure from the 'what States do' principle. This is because it broadens the application of the principle to, potentially, an array of purely private and mixed goods that are well beyond States' average provision of services.
- 87 Western Australia used the Schools assessment and Commonwealth tied grants as evidence that the direct method is inconsistent with the Commission's dollar-for-dollar treatment of other non-State spending. Western Australia noted 'if private enrolments are higher, then public enrolments are lower by the same amount, not the same percentage'. There is a key difference between schools and health. School attendance is compulsory but there is discretion in the use of non-emergency health services.²² In addition, only Commonwealth payments that support normal State services have a dollar-for-dollar offset to State spending. Commonwealth payments supporting services that are not the responsibility of States do not offset State spending. The Commission considers that dollar-for-dollar substitution is only appropriate when State and non-State services are fully substitutable and this is consistent across all the assessments.
- 88 In conclusion, the extent to which the health assessment should recognise differences between States in the availability of non-State sector services is the key point of contention. The Commission intends to continue using the direct method with an appropriate adjustment to recognise the influence of the non-State sector. This is consistent with the 'what States do' principle and the scope of HFE.
- 89 The Commission considers that most of the Northern Territory's concerns relate to specific implementation issues in the community and public health component.

²² Furthermore, by focusing on student numbers and not dollars, the schools example ignores the significant difference in the cost to the State of government and non-government students. States spend on average \$9 766 per government student and \$2 174 per non-government student (2016-17), meaning that if a government student moves to a private school, State spending would reduce by \$7 592, rather than \$9 766, so a dollar-for-dollar offset does not occur.

Refinements to the method to address these concerns are covered in the following sections.

Impact of the non-State sector

- 90 In order to implement the direct method, it is necessary to identify:
- the proportion of State services affected by the availability of substitutable services provided by the non-State sector
 - the best indicator for assessing the level of non-State sector activity in each State.
- 91 There are similar health services provided by both the State and non-State sectors that are potentially substitutable. For example, childhood immunisation can be provided free of charge by either a State community health centre or a bulk billed general practitioner (GP). The availability of bulk billed GP services would likely reduce the demand for similar services provided by the State sector. The more immunisations performed by GPs, the fewer immunisations States will need to provide. The Commission regards such services as substitutable.
- 92 However, the Commission considers that many State services are not substitutable, including the below.
- Services that are not provided by the State sector. For example, States provide few optometry and other allied health services, so changes in the non-State sector provision of these services would have little effect on the demand for State services.
 - Services that are not available in the non-State sector. For example, treatments for the most urgent and complex conditions in emergency departments (EDs) (for example, ED triage category 1) are provided predominantly in public hospitals.
- 93 Identifying non-State services that affect State spending requires evidence that the availability of non-State services affects demand for State services. Considerations, including eligibility for State services and income constraints limiting access to non-State services, are highly relevant. Significant differences in the SDC profile of State and non-State service users may indicate that services are not substitutable.²³ The relevant considerations will be different for each service area.
- 94 In addition to deciding the substitutability level for each component, the Commission must choose the best indicators for assessing the level of non-State sector activity in each State.

²³ For example, the SDC profile of public and private dental patients is very different, suggesting that the State and non-State providers are servicing different population groups.

95 Table 17 summarises the substitutability levels and non-State sector indicators the Commission intends to adopt in the 2020 Review.

Table 17 Proposed substitutability levels and indicators for the 2020 Review

	Substitutability R2015	Substitutability R2020	Indicator R2015	Indicator R2020
Admitted patients	15%	15%	Private patient separations	Private patient separations
ED	15%	15%	Bulk billed GP services	Bulk billed GP services
NAP	40%	35%	Bulk billed specialist and diagnostic services	Bulk billed operations and specialist services
Community health	70%	60%	Bulk billed GP services	Bulk billed GP services

Source: Commission decision.

96 Commission staff proposals on the substitutability levels and indicators for each component of the health assessment are presented in staff discussion paper *CGC 2018-05-S – Review of Substitutability levels for the Health category*.

Regional costs and SDS costs for block funded hospitals

97 Hospital and patient remoteness, as well as hospital size, affect State spending on hospital services. The Commission relies on the Independent Hospital Pricing Authority (IHPA) to measure how these factors influence State costs. Commission staff identified concerns with the assessment of regional costs and service delivery scale (SDS) for the health assessment, which relate to how IHPA data are used in the assessment. States supported the proposal to investigate this issue.

98 States fund hospitals under two arrangements: activity based funding and block funding. In the 2015 Review, the Commission used NWAU data sourced from IHPA in the SDC assessments for hospital and community health expenses. NWAU data were used for both activity based funded (ABF) and block funded (BF) hospitals. The Commission considers that IHPA's costing model for ABF hospitals (the National Efficient Price or NEP model) appropriately measures the higher costs associated with hospital and patient remoteness for ABF hospitals. IHPA's patient and hospital remoteness adjustments are in Table 6. However, the Commission considers the BF NWAU data alone do not reflect all of the regional and SDS costs for these hospitals.

99 Under the National Health Reform funding arrangements, the estimated cost of BF hospitals is based on the National Efficient Cost (NEC) model, not activity levels and the NEP model. Table 18 shows the NEC determination for 2017-18. The efficient (or average cost) of each BF hospital is calculated by multiplying the cost weight by the NEC, which was \$5.406 million in 2017-18. For example, the estimated cost of a

group E hospital in a very remote region in 2017-18 is \$10.73 million (\$5.406 million * 1.985).

- 100 If the same type of hospital received funding on an activity basis, the estimated cost would be approximately \$6.75 million (\$4 910 * 1 375), calculated by multiplying the NEP in 2017-18 by the average number of NWAU for group E. The difference between these two cost estimates reflects additional remoteness and SDS costs not captured in the NWAU data for BF hospitals, if calculated on activity levels only.

Table 18 National Efficient Cost (NEC) model for block funded hospitals, 2017-18

	Type	Hospital size group by NWAU range							
		Grp. 0 <\$0.5 mil	Grp. A 0 to <260	Grp. B <460	Grp. C <660	Grp. D <1 050	Grp. E <1 700	Grp. F <2 500	Grp. G <=3 500
Ave. NWAU (a)		na	130	360	560	855	1 375	2 100	3 000
Inner/outer regional and remote	A	na	na	0.696	0.944	1.122	1.676	2.399	3.645
	B	na	na	0.586	0.795	0.945	1.411	2.022	3.068
	C	0.049	0.379	0.678	0.920	1.093	1.633	2.337	na
Very remote		0.104	0.482	0.684	0.878	1.212	1.985	4.708	na

Note: The NEC in 2017-18 was \$5.406 million and the NEP was \$4 910.

(a) Mid-point of NWAU range.

Source: IHPA, *National Efficient Cost Determination 2017-18*, March 2017.

- 101 Table 19 shows the estimated cost of BF hospitals based on activity (or ABF costing) and BF costing by remoteness area. It also shows the ratio of these two cost estimates. The ratio reflects the higher hospital remoteness and SDS costs for low volume, remote hospitals, which NWAU data do not capture. The Commission intends to apply these ratios to all BF hospital NWAU data used in the health assessments. This will affect the admitted patient, ED and community health components. The BF loadings will be updated annually as IHPA updates its NEC and NEP models.

Table 19 Average cost of block funded hospitals based on IHPA’s NEP and NEC models, 2017-18

	Inner regional	Outer regional	Remote	Very remote
ABF costing (\$m) (a)	434	642	120	151
BF costing (\$m) (b)	598	936	196	302
Ratio/factor	1.377	1.458	1.629	1.998

(a) Commission calculation based on the 2017-18 NEP. This is the estimated cost of BF hospitals based on activity levels only.

(b) Commission calculation based on the 2017-18 NEC.

Source: IHPA, 2017, *National Efficient Price Determination 2017-18* and *National Efficient Cost Determination 2017-18*.

- 102 To facilitate the adjustment for BF hospitals, IHPA will provide separate NWAU data for ABF and BF hospitals. The additional loading will only apply to BF hospital NWAUs. This will address Victoria’s concern about potential double counting.
- 103 The new BF loading should address the concerns of Queensland, Western Australia and the Northern Territory about how well the SDC assessments capture regional costs and SDS disabilities. It will also better recognise the low level of non-State sector service providers in more remote regions.
- 104 IHPA recalculates the patient remoteness loadings each year. The loadings in the latest years’ (2018-19 and 2019-20) cost models are higher than for earlier years. In addition, IHPA have introduced a hospital remoteness adjustment for admitted patients and a new patient remoteness adjustment for ED services (both from 2018-19). These changes will give further recognition to remoteness costs. These will only affect data from 2018-19, not the historical NWAU data. The new BF loadings, however, will affect historical years.
- 105 Western Australia is concerned that the health assessments do not recognise the higher costs due to regional hospitals treating fly-in fly-out (FIFO) workers and tourists. To the extent that interstate FIFO workers and tourists use Western Australia’s hospital services, this will be reflected in the cross-border NWAU data from the Administrator of the National Health Funding Pool. However, the Commission notes that the data on cross-border hospital use show that Western Australians are a net user of interstate hospital services.
- 106 Western Australia’s main argument relates to FIFO workers based in Perth who use hospital services when away from home in more remote high cost locations. IHPA’s new hospital remoteness loading for admitted patients will capture some of these costs. The difficulty in doing anything further is that there are no service use data for these workers. Most FIFO workers are younger and unlikely to access routine health services while working away from home.²⁴ Many health services that they access

²⁴ In addition, large employers in remote regions are likely to provide basic primary health services for their workers.

would likely be due to work-related incidents and would be fully compensable. Overall, there is not a reliable way to estimate the impact of these workers on Western Australia's health costs.

- 107 Western Australia also noted difficulties in attracting and retaining health staff, particularly in more remote areas. During State visits, Queensland and the Northern Territory identified similar issues. All States providing health services in remote areas face very high costs. The Commission has no basis for concluding that remoteness costs vary between States, or for determining the effects of State policy on these costs. The Commission intends to continue to adopt a policy-neutral assessment that affords the same treatment to remote areas in all States.
- 108 The Northern Territory suggested that the estimated loadings for BF hospitals should include all remote areas for comparison. The Commission intends to use all five ABS remoteness areas in the Health assessment in the 2020 Review. The Northern Territory also said that the Gove District Hospital (GDH), which is currently not included in the NEC model, should be considered when calculating the additional remoteness loading for block funded hospitals. The Commission notes the Gove Hospital is a small 30-bed hospital. Its omission from the NEC would have a negligible effect on the NEC hospital weights.

SDC assessment for non-admitted patient services

- 109 In the 2015 Review, the Commission decided not to use IHPA's NWAU data for the SDC assessment of NAP expenses because the data were not sufficiently reliable. The Commission used admitted patient separations data as a proxy indicator to measure service use and applied the general regional costs factor to reflect the influence of remoteness on service delivery costs.
- 110 IHPA have advised that the coverage and quality of NAP NWAU data is improving, and all States will be reporting patient-level NAP activity data from 2018-19. The Commission's intention is to use NAP NWAU data for the SDC assessment when it is sufficiently reliable, as these data are likely to provide the best measure of the material factors that influence State spending on NAP services.
- 111 All States except Western Australia commented on the proposal to use NAP NWAU data. New South Wales, Victoria, Queensland, South Australia and the ACT supported the proposal. New South Wales suggested using the NAP NWAU for assessing NAP and community health services together.
- 112 Tasmania questioned the coverage and reliability of NAP NWAU data and said further analysis of the data would be necessary to assess its suitability. Similarly, the

Northern Territory said the Commission should retain the current proxy until the Australian Non-admitted Care Classification system (ANACC) is fully established.²⁵

- 113 IHPA has been working with States to improve the quality and coverage of NAP data and anticipates that NAP NWAU data will be sufficiently reliable in the near future as the coverage of episode-level data further improves and the patient-based classification system is established.
- 114 In 2016-17, 71% of NAP service events included episode-level data.^{26,27} From 2018-19, this proportion is likely to be close to 100% as all States will be required to report patient-level data. Despite improvements in coverage, the NAP data remain the least reliable public hospital data. However, like data for other hospital services, improvements are ongoing. The Commission expects that the NWAU data for 2018-19 onwards should be sufficiently reliable to use in the assessment.
- 115 The first inquiry using 2020 Review methods will be the first opportunity to use these data. However, 2018-19 data will not be available until late January 2020, which would not allow time to assess the quality of the data and consult with States. Given this timing, the Commission proposes to continue using admitted patient separations as a proxy indicator for NAP services in the 2020 Review. During 2020, the Commission will review the 2018-19 data and consult with States on whether to use it in the 2021 Update.
- 116 The Northern Territory suggested retaining the current proxy until the Australian Non-admitted Care Classification system (ANACC) is fully established. The ANACC is under development, with the aim of replacing the current clinic-based Tier 2 classification. After the full implementation of the ANACC, NAP NWAU data will be fully comparable with admitted patients and ED NWAU data.²⁸ The Commission considers that the NAP NWAU data based on the Tier 2 classification with comprehensive coverage are likely to be a better indicator than the current proxy of admitted patient separations.
- 117 The Commission does not intend to adopt New South Wales' suggestion that it use the NAP NWAU for assessing NAP and community health services in a single component. Despite sharing a classification system, there is no reason to expect the NAP NWAU, which relates to a subset of services included in the Tier 2 classification, will provide a more suitable proxy for community and public health services than the existing proxy — ED triage 4 and 5 NWAU data.

²⁵ Paragraph 116 describes the ANACC.

²⁶ AIHW, 2018, *Non-admitted patient care 2016-17: Australian hospital statistics*, cat. no. HSE 206.

²⁷ Episode-level data includes selected patient characteristics; the type of outpatient clinic; whether the episode was an individual or a group service event; the source of the request for service; the service delivery setting; the service delivery mode; the type of care provided; whether the service involved care from multiple health-care providers; and the funding source for the service event.

²⁸ IHPA expects to complete the first version of the ANACC by 2020. Implementation will follow.

- 118 **Regional costs and service delivery scale.** Since the admitted patient separations data only recognise the greater use of services by people in remote regions and not the additional costs of servicing those groups, separate regional costs and SDS disabilities are required. The Commission intends to apply a combined regional costs and SDS loading, based on data for ED services, to recognise these costs. In the 2015 Review, the Commission used the general regional costs gradient, based on schools and police data. It did not recognise any SDS costs. IHPA's ED regional costs and SDS loadings are the best available indicators of these costs for NAP services.

SDC assessment for community and public health services

- 119 In the absence of a national dataset on the usage of State-provided community health services, the 2015 Review SDC assessment for this component was based on data from IHPA on ED triage 4 and 5 NWAU.
- 120 For the 2020 Review, staff requested State data on community health services with the aim of investigating the possibility of building a national SDC profile for these services using State data.
- 121 New South Wales and Victoria supplied cost and activity data for a subset of their community and public health services. The data supplied by New South Wales and Victoria showed that use rates vary significantly for Indigenous and non-Indigenous people. Service use for Indigenous people is twice that of non-Indigenous people. The pattern is similar to hospital services. The New South Wales and Victorian data showed use rates increased with the level of remoteness but the use rates were different. The SES patterns were also different. For both States, use by high SES populations was lower than more disadvantaged SES groups. However, in New South Wales, the middle three SES quintiles had the highest use rates. In Victoria, the most disadvantaged quintile had the highest use rates.
- 122 It is difficult to draw any definitive conclusions about the use of community and public health services from the State data. There is considerable variation in data quality and the scope of the States' data. For example, the services covered by the Victorian dataset are a subset of the services provided by Victorian community health centres, which are narrower in scope than the community health component.
- 123 In the absence of comprehensive and comparable State data, the Commission considers that IHPA NWAU data on ED triage category 4 and 5 remain the best proxy for measuring the SDC disability for community health services. ED 4 and 5 episodes and community health services are similar in nature — they are less severe and less urgent episodes and have limited connection with hospital admissions. The use rates by remoteness and SES based on ED triage 4 and 5 data tended to fall in between the New South Wales and Victorian use rates.

- 124 The BF adjustments described previously, which measure additional regional costs and SDS costs for BF hospitals, will be applied to the ED 4 and 5 NWAU data used in the community health assessment. This will better reflect the high cost of providing community health services in small and remote clinics. During State visits, Queensland, Western Australia and the Northern Territory highlighted the very high cost of providing services in remote communities. The high costs reflect high staff to patient ratios, high agency staff costs and high input costs. These changes should address concerns of Queensland, Western Australia and the Northern Territory.
- 125 A new classification for ED services, the Australian Emergency Care Classification (AECC), is under development,²⁹ which will measure the treatment, severity and complexity of ED episodes. In a future review, the new classification system may provide a better subset of ED episodes on which to base the community health assessment.
- 126 **Discount.** In the 2015 Review, the Commission applied a 25% discount to the SDC assessment for community health. This reflected concerns about how closely the socio-demographic profile of people using EDs reflects the profile of people using community health services.
- 127 By definition, a proxy indicator is not ideal. Nevertheless, the ED 4 and 5 NWAU data are the best available indicator for community health services. It is unclear that a discount improves the assessment. It reduces the influence of disabilities including Indigeneity, remoteness and service delivery scale, which affect State spending. Therefore, the Commission intends to remove the 25% discount.

Other issues considered by the Commission

- 128 There were a number of other issues considered by the Commission, largely in response to concerns raised by States. These issues related to the method for measuring existing disabilities or requests for new disabilities that were not included in the 2015 Review assessment. The main reasons for not assessing certain disabilities identified by States are:
- the conceptual case for a disability has not been established
 - an assessment would not be material, that is, would not redistribute more than \$35 per capita for any State³⁰
 - data are not available to make a reliable assessment.

²⁹ It will be used to price ED services from 2019-20 according to IHPA's *Three Year Data Plan 2018-19 to 2020-21*.

³⁰ The Commission has set a materiality threshold for including a disability. The materiality test applies to the total impact the disability has on the redistribution across all revenue or expense categories in which it is assessed. To be included, a disability assessment must redistribute more than \$35 per capita away from an equal per capita assessment for any State.

Indigenous Australians' Health Program (IAHP) funding

- 129 The Commonwealth provides funding to a range of organisations including Aboriginal Community Controlled Health Services (ACCHS), to deliver comprehensive, culturally appropriate primary health care. Funding is provided through the IAHP.³¹
- 130 The 2015 Review assessment recognised that IAHP funding reduces the amount States need to spend to provide community and public health services. The IAHP non-State sector adjustment is the difference between assessed and actual IAHP funding. Table 20 shows the calculation of the adjustment for 2017-18 based on 2015 Review methods. The assessment uses ED triage category 4 and 5 data for the Indigenous population sourced from IHPA.

Table 20 IAHP adjustment, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Assessed IAHP grants (A)	182	31	179	100	35	20	3	99	649
Actual IAHP grants (B)	138	53	155	93	42	12	11	145	649
Non-State sector adjustment (A - B)	44	-21	24	7	-7	8	-8	-46	0

Source: 2019 Update report calculations. Single year assessment for 2017-18.

- 131 The Northern Territory presented AIHW data showing it has a greater presence of ACCHS than other States, which tend to be smaller and more remote than ACCHS in other States. Therefore, an identical amount of IAHP funding would purchase more services in other jurisdictions than the Northern Territory due to differences in remoteness and SDS disabilities. The Northern Territory said interpreting an increase in IAHP funding as a reduction in State fiscal needs is unduly simplistic given differing levels of unmet need in the Indigenous population. It argued that IAHP funding supplements, rather than substitutes for State spending, with the overall aim of increasing service provision. The method of assessment effectively redistributes any increase in funding aimed at reducing unmet need, thus eroding any progress toward closing the gap in Indigenous health outcomes.
- 132 The Northern Territory is also concerned there may be some double counting between the ACCHS non-State sector adjustment and community health non-State sector adjustment based on bulk billed GP data because the bulk billed GP data includes claims by ACCHS.
- 133 There is a level of unmet demand in small, remote Indigenous communities in all States, and the Commonwealth and States are working to increase the level of services in these communities. However, ACCHS offer similar types of services as State community health centres. If a Commonwealth funded ACCHS is located in a community, a State is unlikely to provide its own service. As such, a State receiving

³¹ Previously known as Indigenous and Rural Health Division (IRHD) grants.

relatively more Commonwealth IAHP funding will need to spend relatively less to provide the average level of State services. As such, Commonwealth funded ACCHS services are substitutable for State services rather than complementary.

- 134 The main issue for the IAHP grant adjustment is whether the current data for measuring assessed IAHP grants is appropriate. The current assessment uses the Indigenous SDC profile from the community health assessment, which uses ED NWAU data. The Northern Territory said this understates service use in small, remote communities where EDs are not present, and overstates the IAHP non-State sector adjustment.
- 135 The AIHW collects data on ACCHS for its report on health services provided by these organisations.³² The data are collected through the Online Services Report (OSR) data collection. The collection provides a range of data including full-time equivalent (FTE) staff by region. The AIHW data show very similar but not identical use patterns to ED triage 4 and 5 NWAU data. In particular, the AIHW data shows there is greater use of ACCHS services in remote areas.
- 136 The Commission considers the AIHW data are a more suitable data source for assessing IAHP grants than the current proxy. The AIHW data relate to community health and public health services, which are the services being assessed. There are some issues with data coverage for the OSR collection, but overall the OSR data are more appropriate for the Commission's purpose.
- 137 **Regional costs and service delivery scale.** Since the AIHW data are on FTE staff numbers, a regional costs factor based on IHPA data will recognise the higher costs associated with providing services in more remote regions. The FTE staff numbers will capture SDS influences.
- 138 The Northern Territory considers there may be double counting between the IAHP non-State sector adjustment and the main community health non-State sector adjustment based on bulk billed GP data because the bulk billed data includes claims by ACCHS. IAHP grants are a separate funding source to the Medicare benefits. An ACCHS receiving IAHP grants may also receive Medicare Benefits Schedule (MBS) payments. Both types of Commonwealth funding affect State community health expenses.

Cross-border service use

- 139 The current assessment recognises the effect of cross-border service use on State spending, with different methods being used for hospital and community health services.

³² AIHW, 2016, *Healthy Futures Aboriginal Community Controlled Health Services Report Card 2016*, cat. no. IHW 171.

140 **Hospital services.** There are two aspects to the current arrangements for ensuring States are compensated for the recurrent cost of providing hospital services to residents of another State. The first relates to the Commonwealth contribution to the recurrent cost of treating non-residents and the second relates to the State contribution to these costs.

- The Commission makes a cross-border adjustment to actual *National Health Reform Agreement* (NHRA) funding payments used in its Commonwealth payments assessment to ensure that any funding to a State for non-resident activity does not influence a State's GST distribution. The adjustment affects all States (not just New South Wales and the ACT) and ensures that the States retain the Commonwealth contribution to the recurrent cost of treating non-residents. The Commission uses cross-border NWAU data from the National Health Funding Body (NHFB) and the NEP for the relevant year to calculate the adjustment to Commonwealth funding.³³
- The NHRA allows bilateral agreements between States to facilitate reimbursement of the costs of cross-border service use. These agreements allow States to obtain reimbursement for their share of the recurrent cost of treating non-residents. There is a bilateral health agreement between New South Wales and the ACT covering these costs.

141 The cross-border adjustment to Commonwealth funding and the *ACT — New South Wales Health Service Cross-Border Agreement* are based on the NEP calculated by IHPA. The NEP does not include any allowance for capital costs. The ACT asked the Commission to consider adding a cross-border factor to the Investment assessment. It estimated its average annual unfunded cross-border capital cost was \$10.5 million.

142 Using NWAU data from the Administrator of the National Health Funding Pool, the Commission calculated a cross-border capital stock factor for the ACT for the Investment assessment for 2016-17. The factor reflects net cross-border activity for all States, not just the ACT and New South Wales. An assessment is material for the ACT. Table 21 illustrates the factor calculation.

³³ The Commission's terms of reference require this adjustment.

Table 21 Cross-border capital stock factor, Health, 2016-17

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	'000	'000	'000	'000	'000	'000	'000	'000	'000
NWAU by State of activity (A)	2 585	2 000	1 574	820	582	141	144	148	7 994
Net cross-border NWAU (B)	-56	22	12	-3	3	-7	31	-2	0
NWAU by State of residence (C = A - B)	2 641	1 978	1 562	823	580	148	113	150	7 994
Factor (B / C)	0.978	1.010	1.007	0.996	1.004	0.953	1.270	0.983	1.000

Source: *Annual Report 2016-17*, Administrator of the National Health Funding Pool.

- 143 The ACT also said that, due to the 2% services volume growth cap in the ACT–New South Wales bilateral agreement, it was under-compensated in 2016-17 by \$5.9 million (at the NEP level) and \$28 million (based on actual ACT cost). The ACT asked the Commission to consider an allowance of \$3.5 million to reflect net unfunded costs.^{34,35}
- 144 The ACT said it has unfunded recurrent expenses due to the 2% growth cap in the bilateral agreement. The Commission considers this an issue that should be resolved directly between the ACT and New South Wales.
- 145 **Community health services.** In the 2015 Review, the general method was used to estimate the effect of cross-border use of ACT community health services by New South Wales residents. The method was based on community health data indicating that between 7% and 10% of services in the ACT were provided to New South Wales residents.³⁶ A cross-border factor was calculated to reflect this level of cross-border use.
- 146 For the final report the Commission intends to develop a simpler method for calculating the cross-border factor. The general method has been used as a placeholder for the draft report.
- 147 The ACT said the Commission should assess the community health cross-border disability using updated usage data. Based on data for three service areas (breast screening, community nursing and mental health counselling), the ACT estimates an average cross-border usage rate by New South Wales residents of 5.3% for 2017-18. It noted that cross-border use has been growing.
- 148 The 5.3% figure proposed by the ACT relies on very partial data. The ACT outlined the difficulty in obtaining reliable data on service use. This is consistent with the Commission’s experience in the community health area.

³⁴ The ACT calculation is after adjusting for unfunded use of New South Wales hospital services by the ACT residents (using preliminary and partial data).

³⁵ Information the ACT provided in a supplementary submission did not provide sufficient additional information to persuade the Commission to adopt a higher proportion.

³⁶ Based on data provided by the ACT for the 2010 Review.

- 149 The Commission considers there is a conceptual case for recognising a cross-border disability for community health but the data provided by the ACT is not comprehensive. The cross-border factor derived for hospital services would not be a reliable indicator of the level of community health cross-border use. This is due to the different nature of community health services including the fact that the ACT can restrict non-resident access to ACT community health services. It cannot do this for hospital services.
- 150 Since the data the ACT has provided to support its cross-border claim is not comprehensive, the Commission intends to adopt a cross-border allowance that reflects that on average, the cross-border usage rate by New South Wales residents is 4%. This is less than the 7% to 10% used in the 2015 Review. In 2017-18, this equates to a cross-border allowance of about \$7 million.³⁷

Culturally and linguistically diverse (CALD) patients

- 151 In the Health draft assessment paper (DAP), the Commission proposed not to include a cost adjustment for culturally and linguistically diverse (CALD) patients because any additional costs for CALD patients compared with non-CALD patients appear to be small.
- 152 Queensland, South Australia, Tasmania and the ACT supported the staff proposal. New South Wales and Victoria considered CALD patients were more resource intensive. New South Wales said it would work with other CALD supportive States to progress this issue and would inform the Commission of further developments. The Northern Territory recommended that IHPA investigate this issue and believed the adjustment, if any, would flow through to the Commission's assessment.
- 153 As reported in the DAP, IHPA recently completed a costing study³⁸ to inform a policy decision on whether an adjustment in the NEP for CALD patients is warranted. The study focused only on the cost impact of CALD patients when hospital based services are utilised. It concluded, based on Round 17 NHCDC data, that a CALD adjustment to the NEP model for sub-acute, ED or outpatient encounters could not be supported. It found that for acute admitted encounters, there was some evidence of CALD patients costing more than non-CALD patients but the differences were small. For sub-acute inpatients, the results were not consistent between jurisdictions. For ED attendances, the higher cost for CALD patients were driven by the higher proportion of triage 1 attendances and their older age profile. Based on this costing study, IHPA decided a cost adjustment for CALD patients could not be justified.

³⁷ Information the ACT provided in a supplementary submission did not provide sufficient additional data to convince the Commission to adopt a higher proportion.

³⁸ IHPA, 2015, *Culturally and Linguistically Diverse (CALD) Patient Costing Study Report*.

REDISTRIBUTION FROM AN EPC ASSESSMENT

154 Table 22 shows the extent to which the assessment for this category differs from an EPC assessment of health expenses. States with a positive redistribution are assessed to have above average spending requirements and States with a negative redistribution are assessed to have below average spending requirements. In per capita terms, Tasmania, the ACT and the Northern Territory experience the largest redistributions.

Table 22 Redistribution from an EPC assessment, Health, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	-662	-1 141	459	199	269	397	-152	631	1 955
\$ per capita	-84	-179	93	77	156	756	-364	2 556	79

Note: The redistribution is the difference from an EPC assessment of category expenses.

Source: Commission calculation.

155 The main reasons for these redistributions in per capita terms are differences between States in population groups that are high or costly users of health services, which the SDC assessments capture. The SDC assessments for the admitted patients and community health components contribute most to the redistribution. Differences between States in the provision of services provided by the non-State sector and differences in wage costs have a significant, but much smaller effect on redistributions.

156 The main reasons for the redistributions for each State are:

- New South Wales has a lower than average proportion of people living in remote areas and higher than average levels of non-State sector provision of health services. This is partially offset by its higher than average wage costs.
- Victoria has a lower than average proportion of Indigenous people, and far fewer than average people living in remote and very remote areas. This is in part offset by lower than average levels of non-State health services and relatively high wage costs.
- Both Queensland and Western Australia have higher than average proportions of Indigenous people and people living in remote and very remote areas. For Queensland, this is partially offset by higher than average provision of non-State sector health services. Western Australia has lower than average use of non-State sector health services.
- South Australia and Tasmania have higher proportions of their populations with low SES. They also both have older than average populations. In both States, this is partially offset by lower than average wage costs.
- The ACT has much lower than average shares of older people, Indigenous people, low SES and remote populations. This is partially offset by a lower than average use of non-State health services and higher than average wage costs.

- The Northern Territory has by far the highest proportion of Indigenous people and those residing in remote and very remote areas. This is partially offset by higher than average provision of non-State sector health services.

157 Table 23 provides a summary of the main disabilities contributing to the redistribution from an EPC assessment for this category.

Table 23 Major reasons for the redistribution, Health, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
SDC (a)	-560	-1 299	632	54	397	439	-282	620	2 142
Non-State sector	-222	93	-123	190	-2	12	81	-28	376
Wage costs	123	62	-54	-47	-117	-41	54	20	259
Cross-border	-7	0	0	0	0	0	7	0	7
Total	-662	-1 141	459	199	269	397	-152	631	1 955

Note: The redistributions from an EPC assessment are illustrative. Disabilities may not add up due to rounding.

(a) Includes regional costs and service delivery scale.

Source: Commission calculation.

UPDATING THE ASSESSMENT

158 As required by the terms of reference, the Commission will incorporate the latest available data in the assessment during the annual updates. This will allow the assessment to reflect changes in State circumstances.

- The following data will be updated annually:
 - estimated resident population data
 - IHPA data on hospital spending by different population groups but with a lag, which means that the Commission will use the same data for years two and three in each update
 - AIHW and APRA data on private admitted patient services
 - Medicare data on bulk billed services
 - data for Indigenous Australians from AIHW.
- Some of the assessment data are not readily available on an annual basis, or remain stable over time. These data will not be updated during the review period:
 - ACT cross-border allowance for community health
 - State data on the proportion of non-hospital patient transport costs and the patient transport cost weight for remote populations will be fixed for the duration of the 2020 Review period

- IRSEO, NISEIFA and other data that reflect Census-derived population structures.

OUTSTANDING ISSUES

159 From the Commission’s perspective, there are no outstanding issues for this assessment.

FURTHER CONSULTATION

160 Before the release of the final report by 28 February 2020, there will be opportunities for consultation on this assessment. For further information about this category, please contact Annie Abello on annie.abello@cgc.gov.au.

ATTACHMENT 13

WELFARE

Summary of proposed changes to the 2015 Review methodology

- Non-NDIS disability expenses are assessed with aged care on an equal per capita (EPC) basis.
- The Australian Bureau of Statistics (ABS) Experimental Index of Household Advantage and Disadvantage (IHAD) is used as the low SES indicator in the other welfare component.
- Service delivery scale has been removed from the family and child services component.
- Expenses for the National Redress Scheme for Institutional Child Sexual Abuse are assessed EPC with expenses on non-NDIS disability and aged care services.

- 1 This attachment contains the Commission’s draft proposals for the Welfare category following consultation with the Commonwealth and States.

SERVICE OVERVIEW

- 2 State expenses on Welfare were \$19.8 billion in 2017-18, representing 9.1% of total State expenses (Table 1). State spending on this function comprises expenses for:
 - family and child services, principally child protection and out-of-home care (OOHC)
 - aged care services
 - services for people with a disability, including State funding contributions to the National Disability Insurance Scheme (NDIS)
 - concessions (excluding transport concessions)
 - other welfare services (including assistance to the homeless, women’s shelters and information, advice and referral services).

Table 1 State expenses on Welfare by State, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Total expenses (\$m)	5 990	4 448	3 970	2 282	1 827	421	267	579	19 784
Total expenses (\$pc)	756	697	800	883	1057	803	640	2 346	799
Proportion of operating expenses (%)	9.0	8.9	8.9	9.1	11.9	8.7	6.6	10.8	9.1

Note: Expenses shown on a gross basis.

Source: Commission calculation using State budget data.

3 Table 2 shows the share of State expenses on welfare from 2014-15 to 2017-18.

Table 2 State expenses on Welfare, 2014-15 to 2017-18

	2014-15	2015-16	2016-17	2017-18
Total expenses (\$m)	16 041	16 923	17 299	19 784
Proportion of operating expenses (%)	8.6	8.7	8.5	9.1

Note: Expenses shown on a gross basis.

Source: Commission calculation using ABS Government Finance Statistics (GFS) and State budget data.

4 Because those in receipt of welfare services tend to be from low socio-economic status (SES) households, user charges are small (Table 3). User charges were \$603 million in 2017-18, equivalent to just over 3% of category expenses. Revenues from user charges are assessed on an EPC basis in the Other revenue category.

Table 3 Welfare, user charges, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Revenue (\$m)	33	95	8	191	153	0	8	117	603
Revenue (\$pc)	4	15	2	74	88	0	19	472	24

Note: User charges refer to revenue from the sale of goods and services classified in GFS to economic type framework (ETF) 112. The majority are revenue for State provided aged care services.

Source: Commission calculation using ABS GFS and State budget data.

State roles and responsibilities

5 States have policy and service delivery responsibility for most welfare services other than aged care services and, with the full implementation of the NDIS, most disability services.

6 By far the largest expense item under family and child services is State government funding for child protection and out-of-home care. Significant expenses are also associated with early intervention and family support (including intensive family support) services. Family and child services also cover State expenses on childcare and after-school care but these represent only a very small proportion of expenses.

- 7 On full implementation of the NDIS, States will no longer provide extensive disability services. By 2019-20, when all States other than Western Australia are expected to be at NDIS full scheme, State data indicate that on average, 94% of disability services are projected to be attributed to the NDIS.
- 8 All States provide funding to water and electricity providers to provide concessions and rebates to users on low incomes. Rates concessions, or in some instances a cost of living concession or rebate, are also provided to those on low incomes. States also provide concessions in a number of other areas within welfare as well as public transport concessions.¹
- 9 Other welfare services cover a wide range of services, including homeless persons' assistance, women's shelters, care of refugees, prisoners' aid, Indigenous welfare services, and information, advice and referral services. Homelessness services account for the bulk of other welfare expenses.

Commonwealth roles and responsibilities

- 10 Although States have policy and delivery responsibility for many welfare services, the Commonwealth plays a key role in developing national policy and reform directions, and provides significant funding to State governments. Consequently, over recent years, there have been some key changes to the way welfare services are provided, stemming from changes¹ in Commonwealth-State responsibilities.
- 11 The Commonwealth has assumed funding, policy and operational responsibility for aged care services — including those formerly provided by the States under the Home and Community Care (HACC) program — in all States, most recently Western Australia (from July 2018).
- 12 Under the NDIS, the delivery of disability services is a Commonwealth responsibility, while funding is a joint Commonwealth and State responsibility. The Medicare Levy was increased, with effect from 1 July 2014, to help fund the scheme, in addition to State contributions. Services are provided through the National Disability Insurance Agency (NDIA) — an independent statutory agency.
- 13 The Commonwealth provides funding to the States for welfare, comprising the National Disability Special Purpose Payment (SPP) and National Partnership Payments (NPPs). The National Disability SPP will cease upon full implementation of the NDIS. Table 4 shows the main Commonwealth payments to the States for welfare in 2017-18. Not included are payments made under the National Partnership Agreement on Homelessness (\$117 million in 2017-18). These payments were rolled into the new National Housing and Homelessness Agreement (NHHA) in July 2018.

¹ Transport concessions, including student transport concession, are included in the Transport category.

Table 4 Commonwealth payments to the States for Welfare, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
National Disability SPP (\$m) (a)	495	399	310	162	108	33	0	15	1 522
Transitioning for aged and disability - Specialist disability services (\$m) (b)	154	74	44	0	32	12	3	6	325
Pay Equity for the Social and Community Services Sector (\$m) (c)	28	92	92	29	24	10	2	2	280
Home and community care (\$m) (d)	0	0	0	195	0	0	0	0	195
Payment from the DisabilityCare Australia Fund (\$m)	0	0	53	0	33	0	43	2	130
Homelessness (\$m)	30	23	29	15	9	3	2	5	117
Trial of My Way sites (\$m)	0	0	0	64	0	0	0	0	64
Other (\$m)	0	2	0	0	0	0	0	63	66
Total (\$m)	707	591	528	464	207	58	50	94	2 699
Total (\$pc)	89	93	106	180	120	111	119	380	109

Note: This table shows major payments only. Commonwealth Own Purpose Expenses (COPEs) are not included. Payments that the Commission treats as 'no impact' are included in the table.

- (a) When the NDIS reaches full scheme status in a State, the SPP will be redirected to the NDIA, which will be responsible for administering the NDIS in every State. With the exception of Western Australia, the SPP will cease in all States in 2019-20.
- (b) This NDIS transition funding will cease to apply from 2020-21.
- (c) This National Partnership funding is for the Commonwealth's share of wage increases arising from a Fair Work Australia 2012 decision for in-scope programs funded through existing National SPPs and NPPs. It will cease to apply from 2020-21.
- (d) The Commonwealth and Western Australia are transitioning HACC responsibilities for older people to the Commonwealth. 2017-18 was the last year this payment was made.

Source: Commonwealth *Final Budget Outcome, 2017-18*.

14 The complete list of Commonwealth payments and their treatment is available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).²

² Most Commonwealth payments to the States affect the grant distribution but some do not. The Commission refers to payments that affect the grant distribution as 'impact' payments. For more information, see Attachment 2 – Commonwealth Payments.

CATEGORY STRUCTURE

- 15 The assessment of the Welfare category is undertaken separately for each of the following components:
- child protection and family services
 - NDIS
 - non-NDIS disability services and aged care
 - concessions
 - other welfare.
- 16 Table 5 shows the category’s assessment structure, the size of each component and the disabilities that apply.

Table 5 Category structure, Welfare, 2017-18

Component	Component expense	Disability	Influence measured by disability
	\$m		
Child protection and family services	6 310	Socio-demographic composition (SDC)	Recognises that Indigenous status and low socio-economic status (SES) of State populations aged 0-14 and where people live affect the use of services.
		Wage costs	Recognises the differences in wage costs between States.
		Regional costs	Recognises the cost of providing services to different areas within a State.
NDIS	9 201	2011 Census population shares	2011 Census population shares (a).
Non-NDIS disability services and aged care	1 435	EPC	This is an equal per capita assessment.
Concessions	2 171	SDC	Recognises that numbers of pensioner concession card (PCC) plus health care card (HCC) holders affect the use and cost of providing concessions.
Other welfare	666	SDC	Recognises that low SES population characteristics affect the use and cost of services.
		Wage costs	Recognises the differences in wage costs between States.
		Regional costs	Recognises the cost of providing services to different areas within a State.

(a) The population shares will shift to 2021 Census population shares when the data become available, which is most likely to be for the 2023 Update.

Source: Commission calculation using ABS GFS and State budget data.

Category and component expenses

- 17 The main data sources for calculating category and component expenses are ABS Government Finance Statistics (GFS) and State budget data.³
- 18 A split between child protection and OOHC expenses for the child protection and family component is taken from the Productivity Commission's *Report on Government Services 2019*.
- 19 State data are used to derive a split of projected disability expenses into NDIS and non-NDIS expenses in the application year. This split is applied to total disability expenses in the assessment years.
- 20 State data are also used to estimate concessions.

ASSESSMENT APPROACH

Child protection and family services

- 21 Expenses for this component include:
 - child protection
 - out-of-home care.
- 22 State expenses are dominated by child protection-related expenses. In 2017-18, State expenses on child protection, out-of-home care and family support services amounted to \$5.8 billion,⁴ representing around 92% of total State expenses on child protection and family services used in the Commission's calculations.
- 23 The breakdown of the \$5.8 billion of expenses was as follows: 58% was on OOHC, 24% on child protection services, 9% on family support services and 8% on intensive family support services to assist more vulnerable families. The split between OOHC and child protection services reported in *Report on Government Services 2019* is used to disaggregate the component expenses. This allows for separate assessments of OOHC and child protection services.

³ Unless otherwise stated, category and component expenses for the first two assessment years are sourced from ABS GFS. States provide data for the most recent assessment year because GFS data are not available in time for the Review.

⁴ Productivity Commission (2019) [Report on Government Services 2019](https://www.pc.gov.au/research/ongoing/report-on-government-services/2019/community-services/child-protection), Chapter 16, Table 16A.7, (<https://www.pc.gov.au/research/ongoing/report-on-government-services/2019/community-services/child-protection>), [accessed 03/2019].

Socio-demographic composition (SDC)

- 24 Spending by each State on child protection and family services is affected by the size of its population and the presence of those population groups that use services more intensely, such as:
- children
 - Indigenous people
 - socio-economically disadvantaged people
 - people living in more remote areas.
- 25 The Commission has made separate Indigenous and non-Indigenous assessments of child protection expenses and out-of-home care expenses because Indigenous use of each is materially different. In 2017-18, 39% of children in OOHC were Indigenous while only 28% of substantiations were for Indigenous children. This equates to use rates of 63.4 and 49.0 per 1 000 children respectively.

Children

- 26 Child protection and family services are directed at families with children. In deriving use rates, the Commission relate Australian Institute of Health and Welfare (AIHW) child protection data for the 0-17 age group to population data for the 0-14 age group as a proxy. The Commission considers that the 0-14 age group is an accurate representation of State need in this area.

Indigenous status, remoteness and socio-economic status

- 27 AIHW data for 2017-18 indicate that:
- Indigenous children were eight times as likely as non-Indigenous children to have received child protection services and nine times as likely as non-Indigenous children to be in out-of-home care⁵
 - children from very remote areas were four times as likely as those from major cities to be the subject of a 'substantiation'⁶
 - children who were the subject of a substantiation were around seven times as likely to be from the lowest socio-economic areas compared to the highest.⁷
- 28 Socio-economic status is measured using the Non-Indigenous Socio-Economic Index for Areas (NISEIFA) and Indigenous Relative Socio-Economic Outcomes (IRSEO) index.

⁵ AIHW, *Child protection Australia 2017–18*, p 17, 48.

⁶ AIHW, *Child protection Australia 2017–18*, p 28. Substantiations refer to child protection notifications made to relevant authorities where, after investigation, it is concluded that there is reasonable cause to believe the child had been, was being, or was likely to be, abused, neglected or otherwise harmed.

⁷ AIHW, *Child protection Australia 2017–18*, pp 29. The AIHW measures socio-economic status by allocating the relevant Socio-Economic Indexes for Areas (SEIFA) population-based (2016 Census population) quintile score to postcode information available for the child or young person.

The bottom two quintiles for each measure (40% of the population) represent low SES children, while the top three quintiles (60% of the population) are grouped to represent high SES.

Regional costs

- 29 Many welfare services, including child protection services, are provided where clients live. The Commission considers there is a conceptual case for assessing a regional costs disability in the child protection and family services assessment.
- 30 In the absence of specific data for welfare services, the Commission applies a general regional costs gradient to the service population (children who were the subject of a substantiation notification) in order to produce a child protection and family services specific gradient. More information on the general regional costs gradient can be found in Attachment 25 – Geography.

Wage costs

- 31 Differences in wage costs between States have a differential effect on the cost of providing services. There is a general method for measuring the influence of wage costs in components where the disability applies. For a description of the method see Attachment 24 — Wage costs.

Data and method

- 32 The socio-demographic composition cost drivers taken into account are Indigenous status, SES, remoteness and age (Table 6).

Table 6 SDC breakdown, child protection and family services

Age	Indigenous status	SES (b)	Remoteness
0-17 years (a)	Indigenous	High SES (top three quintiles)	Remote (remote and very remote)
	Non-Indigenous	Low SES (bottom two quintiles)	Non-remote (other areas)

(a) Population data for the 0-14 age group is used as a proxy in the SDC assessment.

(b) SES is measured using the NISEIFA for non-Indigenous substantiations and the IRSEO for Indigenous substantiations.

Source: Commission decision.

- 33 AIHW data on children who were the subject of substantiations are used to derive national substantiations use rates by SES, remoteness and Indigenous status (see Table 7). These use rates are used as a proxy for OOHC use rates because data are unavailable for specific characteristics of those in OOHC and address at notification is a more accurate measure of need than carer’s address.

Table 7 Substantiation rates for 0-17 year olds by Indigenous status, remoteness and SES, 2017-18

	Indigenous children	Non-Indigenous children
	Rate per 1 000 children (a)	Rate per 1 000 children (a)
Low SES		
Non-remote	40.8	11.8
Remote	56.9	6.8
High SES		
Non-remote	41.0	5.0
Remote (b)	10.4	3.3

(a) A seven-State average for estimated resident population (ERP) is used because New South Wales do not provide location-based child protection data to the AIHW.

(b) The use rate for high SES, remote Indigenous children is based on a very small number of substantiation observations.

Source: Commission calculation from AIHW and ABS ERP data.

34 With the use rates and estimated resident population (ERP) data, service need across all States and SDC categories are calculated.

35 Expenses for child protection and OOHC are split using the breakdown reported in *Report on Government Services 2019* data. These expenses are then apportioned across the service need population and aggregated to produce SDC assessed expenses.

36 Regional costs and wage costs disabilities are then applied.

Component calculations

37 Table 8 shows the calculation of total assessed expenses for the component in 2017-18.

Table 8 Illustrative assessment, child protection and family component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SDC assessed expenses (\$m)	2 045	1 212	1 487	683	417	168	71	229	6 310
Regional costs factor	0.986	0.981	1.013	1.036	1.013	1.007	0.978	1.208	1.000
Wage costs factor	1.003	1.002	0.998	0.996	0.986	0.984	1.027	1.017	1.000
Assessed expenses (\$m)	2 009	1 183	1 492	700	413	165	70	279	6 310
Assessed expenses (\$pc)	254	185	301	271	239	314	169	1 132	255

Source: Commission calculation.

National Disability Insurance Scheme (NDIS)

38 Expenses for this component reflect State contributions to the NDIA to cover service provision through the NDIS.

- 39 The proportion of State disability expenses that relate to NDIS is backcast because it represents a major change in Commonwealth-State relations and this ensures the assessment is contemporary.⁸ The Commission will continue to backcast until it is confident that the expenses in the three assessment years reflect the full implementation of the NDIS. In the 2019 Update, the Commission took the decision to assess NDIS expenses based on 2011 Census populations.⁹ This method reflects how States will be contributing under full scheme arrangements.
- 40 There are no adjustments for wage costs or regional costs because these do not differentially affect State contributions to the NDIA.

Assessment method

- 41 With full implementation, States are set to fund NDIS disability services through contributions to the NDIA, on the basis of their population shares at the most recent Census (initially, the 2011 Census), with offsets for in-kind supports provided by States (up to an agreed maximum amount and subject to these being phased out).¹⁰
- 42 The Commission will continue assessing NDIS expenses based on the 2011 Census population shares until State contributions are updated to reflect the 2021 Census population shares.

Data and method

- 43 Application year projected expense data provided by the States are used to break down disability expenses between NDIS and non-NDIS disability services.
- 44 Assessed NDIS expenses are calculated and assessed based on 2011 Census population data.

Component calculations

- 45 Table 9 shows the calculation of total assessed expenses for the component in 2017-18.

Table 9 Illustrative assessment, NDIS component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Assessed expenses (\$m)	2 980	2 281	1 842	963	678	212	151	96	9 201
Assessed expenses (\$pc)	376	357	371	373	392	403	364	387	371

Source: Commission calculation.

⁸ Residual disability expenses are assessed in the non-NDIS disability services and aged care component.

⁹ The 2019 Update can be found on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

¹⁰ The in-kind contributions will be offset against agreed cash contributions.

Non-NDIS disability services and aged care

46 Expenses for this component include:

- disability services (other than NDIS expenses)
- aged care expenses.

Assessment method

47 Spending by each State on non-NDIS disability services and aged care is assessed equal per capita (EPC). State spending may vary on these components, however the Commonwealth is responsible for funding these services and any residual services are affected by policy decisions.

48 Population is measured using State ERP data sourced from the ABS.

Data and method

49 Projected expense data provided by the States are used to break down disability expenses between NDIS and non-NDIS disability services.

50 Expenses (both non-NDIS and aged care) are assessed using State population shares.

Component calculations

51 Table 10 shows the calculation of total assessed expenses for the component in 2017-18.

Table 10 Illustrative assessment, non-NDIS disability services and aged care component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Assessed expenses (\$m)	459	370	288	150	100	30	24	14	1 435
Non-NDIS disability (\$m)	168	136	105	55	37	11	9	5	526
Aged care (\$m)	291	234	182	95	63	19	15	9	909
Assessed expenses (\$pc)	58	58	58	58	58	58	58	58	58

Source: Commission calculation.

Concessions

52 Expenses for this component include concessions for Pensioner Concession Card (PCC) and Health Care Card (HCC) holders on electricity and other energy, water and wastewater, rates and other concessions tied to low income. All States offer concessions to individuals with PCCs and the majority of States also offer concessions to HCC holders.

SDC assessment

- 53 Spending by each State on concessions is affected by the size of its eligible population and the type and size of concessions offered. Reflecting eligibility requirements, concessions are assessed using the number of PCC plus HCC holder numbers in each State as a proportion of State population.
- 54 Table 11 shows the number of pensioner concession card and health care card holders as a proportion of State populations in 2017-18. PCC and HCC data are sourced from Centrelink and the Department of Veterans Affairs.

Table 11 Pensioner concession card and health care card holders as a proportion of State populations, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	%	%	%	%	%	%	%	%	%
Proportion	22.0	22.1	23.7	20.3	27.7	32.1	13.5	19.6	22.6

Source: Centrelink and Department of Veterans' Affairs.

- 55 Western Australia said that concession payments per concession card holder differ substantially across States and this raises questions about the real driver of State spending. It supports an EPC assessment. The Commission observes that the impact of different State policies on the type and size of concessions are significant, which explains the large differences in payments per cardholder. PCC and HCC holders are considered a reasonable policy neutral measure of needs. The assessment is material for Tasmania and the ACT.

Component calculations

- 56 Table 12 shows the calculation of total assessed expenses for the component in 2017-18.

Table 12 Illustrative assessment, concessions component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Assessed expenses (\$m)	674	547	456	203	186	65	22	19	2 171
Assessed expenses (\$pc)	85	86	92	79	107	124	52	76	88

Source: Commission calculation.

Other welfare

57 Expenses for this component include:

- homeless persons' assistance
- women's shelters
- care of refugees
- prisoners' aid
- Indigenous welfare services
- information, advice and referral services.

58 Homelessness services likely account for the bulk of expenses. Two other significant areas of State expenses relate to addressing domestic violence and multicultural affairs.

59 States have been directing significant extra resources to domestic violence in recent years, against the backdrop of the Commonwealth's *National Plan to Reduce Violence against Women and their Children 2010-2022*. The ABS functional classification provides little guidance as to the appropriate classification of related expenses. However, significant domestic violence outlays are likely classified to other welfare.

60 New South Wales and Victoria have substantial multicultural budgets, but again it is not clear what expenses might be included in the Welfare category.

Socio-demographic composition (SDC)

61 Spending by each State on other welfare services is affected by the size of its population and the presence of those population groups that use services more intensively, namely socio-economically disadvantaged people.

62 The Commission considers that other welfare services are generally targeted at low SES populations and considers the Index on Household Advantage and Disadvantage (IHAD) the appropriate indicator for assessing needs. The assessment uses relative State proportions of populations in the bottom IHAD quartile (Quartile 1), which are provided in Table 13.

Table 13 Proportions of State populations in the bottom IHAD quartile, relative to the national average, 15-64 year olds

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Average
	%	%	%	%	%	%	%	%	%
Proportion	102	90	104	79	123	163	58	198	100

Source: Commission calculation, derived from ABS, 2019, cat. no. 4198.0 - *Experimental Index of Household Advantage and Disadvantage, 2016*.

Regional costs

- 63 Many services in the other welfare component are provided where clients live. The Commission considers there is a conceptual case for assessing a regional costs disability in the other welfare assessment.
- 64 As in the child protection and family services component, in the absence of specific data, the Commission applies a general regional costs gradient to the service population (persons in households of the lowest IHAD quartile) in order to produce a child protection and family services specific gradient. More information on the general regional costs gradient can be found in Attachment 25 — Geography.

Wage costs

- 65 Differences in wage costs between States have a differential effect on the cost of providing services. There is a general method for measuring the influence of wage costs in components where the disability applies. For a description of the method see Attachment 24 — Wage costs.

Data and method

- 66 The Commission considers that the key feature of the socio-demographic composition of State populations that drives cost differences is low SES. To measure low SES, the Commission have used the 2016 IHAD, which was recently published by the ABS. The assessment is just below the materiality threshold for the Northern Territory. However, SES as a driver is material overall.

Component calculations

- 67 Table 14 shows the calculation of total assessed expenses for the component in 2017-18.

Table 14 Illustrative assessment, other welfare component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SDC assessed expenses (\$m)	217	155	139	55	57	23	7	13	666
Regional costs factor	1.057	0.956	0.973	0.973	1.021	0.978	0.956	1.109	1.000
Wage costs factor	1.003	1.002	0.998	0.996	0.986	0.984	1.027	1.017	1.000
Assessed expenses (\$m)	230	148	135	53	57	22	6	15	666
Assessed expenses (\$pc)	29	23	27	21	33	42	15	60	27

Source: Commission calculation.

CATEGORY CALCULATIONS

- 68 Table 15 brings the assessed expenses for each component together to derive the total assessed expenses for each State for the category. It shows at the component level how each disability assessment moves expenses away from an EPC distribution to obtain assessed expenses.

Table 15 Illustrative category assessment, Welfare, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Child protection and family services									
EPC	255	255	255	255	255	255	255	255	255
SDC assessed expenses	3	-65	45	10	-14	64	-85	674	0
Regional costs factor	-3	-5	3	9	3	2	-6	53	0
Wage costs factor	1	1	-1	-1	-4	-4	7	4	0
Assessed expenses	254	185	301	271	239	314	169	1 132	255
NDIS									
EPC	371	371	371	371	371	371	371	371	371
2011 Census shares	5	-14	0	1	21	32	-8	16	0
Assessed expenses	376	357	371	373	392	403	364	387	371
Non-NDIS disability and aged care services									
EPC	58	58	58	58	58	58	58	58	58
Assessed expenses	58	58	58	58	58	58	58	58	58
Concessions									
EPC	88	88	88	88	88	88	88	88	88
SDC assessed expenses	-3	-2	4	-9	20	36	-36	-12	0
Assessed expenses	85	86	92	79	107	124	52	76	88
Other welfare services									
EPC	27	27	27	27	27	27	27	27	27
SDC assessed expenses	1	-3	1	-6	6	17	-11	26	0
Regional costs factor	2	-1	-1	-1	1	-1	-1	3	0
Wage costs factor	0	0	0	0	0	0	1	0	0
Assessed expenses	29	23	27	21	33	42	15	60	27
Total assessed expenses	802	709	849	800	829	941	658	1 713	799

Note: Table may not add due to interactions between disabilities and rounding. The EPC expenses and assessed expenses are total spending per capita. The amounts for each disability are redistributions from an EPC assessment.

Source: Commission calculation.

INFRASTRUCTURE ASSESSMENT

69 States require infrastructure to support service delivery. State infrastructure requirements are assessed in the Investment category. The main driver of investment is growth in welfare related infrastructure for the welfare service using population. This is defined as proportional to the SDC assessed expenses for each component except concessions.

70 Interstate differences in construction costs are also recognised.

71 For a description of the Investment assessment, see Attachment 21 — Investment.

ASSESSMENT ISSUES

- 72 The 2015 Review assessments provided the starting point for the 2020 methodology review. In April 2018, Commission staff released a draft assessment paper setting out staff proposals for the Welfare category. States provided submissions on the proposals. The staff proposals and State submissions are available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).
- 73 The main assessment issues for the category were:
- what index of socio-economic disadvantage to use for other welfare services
 - whether to merge States' residual aged care and non-NDIS expenses with other welfare expenses and assess them using a general low SES measure
 - the assessment of State funding for the National Redress Scheme for Institutional Child Sexual Abuse.
- 74 The draft assessment paper also canvassed the treatment of the NDIS. This was resolved in the 2019 Update.
- 75 See the section on other issues considered by the Commission for a complete list of other issues for the Welfare category considered in the 2020 Review.
- 76 The following sections discuss the main issues for the category, including State views.¹¹

Index of socio-demographic disadvantage

- 77 The ABS 2006 Census-based Socio-economic Index for Individuals (SEIFI) used by the Commission in the 2015 Review to assess SES in the other welfare component is dated.
- 78 The Commission proposes to use the ABS 2016 Census-based Index of Household Advantage and Disadvantage (IHAD)¹² for assessing SES in the other welfare component. Most States agreed with this proposal. However, New South Wales proposed the use of a SEIFA (Index of Relative Socio-economic Disadvantage) modified to incorporate housing stress¹³ as a proxy for financial stress for both other welfare and family and child services. There is difficulty in accurately measuring housing stress using the Census data (upon which the SEIFA is based). Until these difficulties are resolved, the Commission will not use an indicator of housing stress in any assessment (see Attachment 25 — Geography for more information).

¹¹ State submissions often include significant detail and supporting evidence. In this attachment, the Commission respond to the arguments and evidence States presented in their submissions. For the full detail of State submissions, see the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

¹² Previously identified as the ABS' socio-economic index for households.

¹³ Housing stress is generally considered to occur when a household is forced to spend 30% or more of its income on housing costs.

79 The IHAD is a household based SES indicator and is considered a better indicator of needs than area-based indicators such as SEIFA, or a modified SEIFA. Area based indexes summarise different aspects of the socio-economic conditions of an area in which a person lives. The main limitation with area-based measures is that all individuals or households in an area are assigned the same SES profile.¹⁴ In practice, within any area there are likely to be households with different characteristics to the overall population of that area. For example, a relatively disadvantaged area is likely to contain a number of households that are relatively advantaged. Likewise, a relatively advantaged area is likely to contain a number of households that are relatively disadvantaged.¹⁵ Despite being an experimental index, the ABS advises that the index is reliable for the Commission's purpose.

Non-NDIS disability and aged care services

80 Expenses for aged care services are small and have been assessed on an EPC basis since the 2015 Review. In the draft assessment paper, staff proposed to merge aged care expenses with other welfare expenses and assess them using the same measure of low SES as that used for other welfare expenses. Similarly, non-NDIS expenses were expected to be small and it was proposed to also include them in the other welfare component.

81 A number of States (Victoria, Western Australia, Tasmania and the ACT) raised concerns about assessing residual aged care and disability services using a low SES measure because the people using these services are not necessarily from low SES groups.

82 The Commission accepts that there is limited evidence available to conclude service users are predominantly from low SES groups and intends to assess both aged care and non-NDIS disability expenditure on an EPC basis in this review.

National Redress Scheme for Institutional Child Sexual Abuse

83 The National Redress Scheme for Institutional Child Sexual Abuse was established on 1 July 2018. As such, States will have a responsibility to provide redress and other costs towards participants of the scheme.

84 States have provided preliminary data on the expected expenses for the Scheme. Queensland, New South Wales and the Northern Territory included provision in their 2017-18 (Queensland) and 2018-19 (New South Wales and the Northern Territory) budgets for the anticipated full cost of the scheme over the next decade. Victoria, Western Australia and Tasmania have advised that expenses will be recorded as they

¹⁴ The Commission usually uses area-based indicators such as SEIFA, NISEIFA and IRSEO because many administrative datasets have limited location information (for example, postcode).

¹⁵ See Attachment 25 – Geography for further information on this topic.

are incurred. The anticipated full cost of the scheme for States is \$3.9 billion over 10 years.¹⁶ Annual costs are expected to range from \$2 million to \$80 million, depending on the State.

- 85 State provided data indicates that average individual claim costs do not vary significantly by State. States advise that claims under the current scheme are greatly affected by past policies and programs for the compensation of victims of abuse in institutional settings. People who have received financial compensation through previous schemes are not eligible for redress under the current scheme. Due to the extent of past policy influences an actual per capita (APC) assessment is not considered sufficiently policy neutral. A reliable driver of State costs has not been identified. Consequently, the Commission intends to assess these expenses EPC in the non-NDIS disability services and aged care component.

OTHER ISSUES CONSIDERED BY THE COMMISSION

- 86 There were a number of other issues considered by the Commission, largely in response to concerns raised by States. These issues related to the method for measuring existing disabilities or requests for new disabilities that were not included in the 2015 Review assessment. The main reasons for not assessing certain disabilities identified by States are:
- the conceptual case for a disability has not been established
 - an assessment would not be material, that is, redistribute more than \$35 per capita for any State¹⁷
 - data are not available to make a reliable assessment.
- 87 Other issues considered by the Commission include:
- ACT cross-border disabilities
 - updating the regional cost gradient
 - whether homelessness expenses should be in the Welfare or Housing categories
 - the absence of New South Wales data in the child protection data sourced from the AIHW

¹⁶ Finity Consulting, 2015, *National Redress Scheme Participant and Cost Estimates*, Royal Commission into Institutional Responses to Child Sexual Abuse (https://www.childabuseroyalcommission.gov.au/sites/default/files/file-list/national_redress_scheme_participant_and_cost_estimates_report.pdf) [viewed 8 May 2019]

¹⁷ The Commission has set a materiality threshold for including a disability. A disability assessment must redistribute more than \$35 per capita away from an equal per capita assessment for any State to be included. The materiality test applies to the total impact the disability has on the redistribution of funds across all revenue or expense categories in which it is assessed.

- the quality of AIHW child protection data
- the higher cost of providing child protection services to people of culturally and linguistically diverse (CALD) backgrounds
- the higher cost of providing child protection services to Indigenous children beyond those relating to remoteness
- the appropriate disability for assessing homelessness expenses.

Cross-border assessment

- 88 In the 2015 Review, a cross-border disability was used to take account of ACT service use by New South Wales residents of both non-NDIS disability services and other welfare services (homelessness).
- 89 Commission staff proposed discontinuing cross-border payments in the draft assessment paper. In their response submission, the ACT maintained it faces substantial costs in providing out-of-home care (OOHC), crisis accommodation and homelessness services, to New South Wales residents.
- 90 The Commission acknowledges that New South Wales residents can access services in the ACT including homelessness services. AIHW data indicate that 6% of clients who accessed homelessness services in the ACT during a three year period to 2016-17 came from interstate. Almost 80% of interstate clients were from New South Wales. Making a variety of assumptions about the State of residence of unidentified clients and the average cost of ACT services per client,¹⁸ the ACT estimates the total cost of cross border homelessness services is about \$3 million per year. The Commission is concerned about the number of assumptions involved in this calculation. In addition, the data do not provide for any usage of New South Wales services by ACT residents. The Commission does not consider this to be a reliable estimation of net cross border costs for the ACT. There are similar concerns with the ACT's estimate for use of ACT crisis accommodation by New South Wales residents.
- 91 For child protection and family services, the case for cross-border usage appears clearer with a stated 20% of children on Care and Protection Orders in the ACT having had a New South Wales care address in 2016-17. However, the ACT did not provide data relating to any use of New South Wales OOHC services by ACT residents.
- 92 Further, the transfer of care interstate is governed by an Interstate Protocol, agreed to by all jurisdictions. This protocol specifies cost bearing arrangements. The Commission considers that the reimbursement of ACT costs for delays or issues in the

¹⁸ According to the Report on Government Services, the ACT cost per client accessing homelessness services was \$4 509 in 2016-17. The Australian average cost was \$2 835. In its calculations of the cost of services for New South Wales residents, the ACT used its actual cost. (<https://www.pc.gov.au/research/ongoing/report-on-government-services/2018/housing-and-homelessness/homelessness-services>).

transfer of New South Wales child protection orders should be sought in accordance with the protocol.

- 93 The Commission acknowledges that the ACT may face some costs providing services to New South Wales residents for homelessness and child protection and family services. However, in the absence of reliable data to accurately assess the net cost of cross-border service delivery and with the existence of an Interstate Protocol, managing the responsibility for meeting such costs, it has not been included for any component of welfare services.

Regional cost gradient

- 94 Many welfare services, including child protection services, are provided where clients live. The Commission considers there is a conceptual case for assessing a regional costs disability in the welfare assessment.
- 95 In the 2015 Review, a general regional costs gradient was calculated from cost gradients for police and schools, which was discounted before being applied to welfare expenses. For the 2020 Review, data are available for more services and therefore the Commission has greater choice for selecting an appropriate gradient for welfare services.
- 96 The Commission intends to weight a general regional cost gradient using the relevant service populations in the child protection and family services and the other welfare components. The general regional costs gradient is measured using admitted patient and schools data. As this is the best available proxy the Commission does not intend to apply a discount to the factor. These have been described above in the Assessment Approach section.
- 97 The Northern Territory expressed concerns about the potential new cost gradient, arguing that a discount should not apply as they face significant costs with supporting family and child protection investigations in remote and very remote areas, and discounting would not capture this.
- 98 On the other hand, New South Wales argued that the general gradient from the 2015 Review is too steep and overestimates the additional costs for remote service delivery.
- 99 More information can be found in Attachment 25 — Geography.

Homelessness expenses

- 100 States were consulted on retaining the homelessness related expenses in the other welfare component. The alternative was to move the expenses to the Housing category.

- 101 All States agreed to retain homelessness related expenses within the other welfare component of the Welfare category.

Incorporating NSW data on substantiations and OOHC

- 102 Data from the AIHW on child protection substantiations and OOHC by socio-demographic composition are used to assess expenses on child protection and family services. New South Wales currently do not provide these data to the AIHW and therefore a seven-State average is used, excluding New South Wales.
- 103 New South Wales analysis indicated significant differences between the use rates by SDC characteristic derived from its data on substantiation and OOHC, and the average of the other seven States used by the Commission. It noted that, given the size of its population, its use rates would significantly change national average expenses. The Commission asked New South Wales to provide the data and method it used for calculating the use rates for its submission. It has not yet provided this information. Therefore, the Commission has been unable to confirm that the New South Wales use rates are comparable with AIHW data.
- 104 Pending the provision by New South Wales of their data to the AIHW, and the AIHW undertaking their normal quality assurance processes on the data, the assessment will continue to be based on the average of the other seven States.

Quality of AIHW data on child welfare

- 105 New South Wales questioned the consistency of the AIHW data across States and the impact of this as well as of State policies on use rates. New South Wales said that the Productivity Commission acknowledges that many of the existing measures reported in its *Report on Government Services* are currently inappropriate for inter-jurisdictional comparison. For example, 11 out of 17 child protection indicators in the performance indicator framework are not comparable across States or years.
- 106 Moreover, there are significant variations across jurisdictions in how service systems are organised, and services prioritised and delivered. Unless these differences are explicitly accounted for, it is not possible to make valid comparisons across jurisdictions. Data submission rates also affect the figures. This can result in a distortion of the representation of performance.
- 107 The Commission's family and child assessment only uses child protection and OOHC use data. The comparability of other indicators is not relevant. Staff consider that the use data have been provided by States for many years. The data show consistency over time and across socio-demographic characteristics. In addition, comparisons across jurisdictions are not made; rather, the data are aggregated to derive national average use rates.

Culturally and linguistically diverse (CALD) cost weight

- 108 New South Wales and the Northern Territory argued for the introduction of a cost adjustment to reflect the higher costs associated with children and families with a CALD background. A cost adjustment would reflect the extra costs associated with providing services for cultural differences and language barriers.
- 109 New South Wales argued that although being from a CALD background does not increase the likelihood of entering the child protection system, their data on the cost of service packages for OOHC of children from a CALD background point to an additional 2% to 3%, compared to non-CALD children.
- 110 The Northern Territory argued that support to overcome language barriers was a significant driver of costs for those from a CALD background. Due to services provided to Indigenous people, it faces extra costs providing support through professional interpreters in child protection services.
- 111 The Commission accepts the conceptual case that services to CALD people impose an additional cost on States. However, the absence of comprehensive and reliable cost data, along with CALD use data, limits the Commission's ability to develop a CALD assessment. Should data become available in the future, the Commission will investigate its suitability.

Indigenous cost weight

- 112 With a large Indigenous population, the Northern Territory was concerned an assessment based on substantiations and OOHC numbers broken down by Indigenous status and remoteness may not accurately reflect the higher cost of providing services to Indigenous children. These costs include travel and related expenses associated with children, particularly remote Indigenous children, in OOHC outside of their community, to ensure they stay connected to their community and culture.
- 113 The Northern Territory argued for a separate Indigenous cost weight to reflect:
- the additional support and services required to address legacies of Indigenous children's trauma
 - the additional costs to assist in maintaining cultural identity and family and social networks.
- 114 Data provided by the Northern Territory showed that the Northern Territory actually spends 3.4 times more than average compared with 4.4 times more derived from the Commission's assessment, which takes into account differential use by Indigenous status, remoteness, SES, regional costs and wage costs. The fact that the Northern Territory spends less than the Commission assesses it needs to provide the average level of service suggests that it does not have unrecognised needs.

- 115 In addition, in the 2015 Review, the Commission concluded that an Indigenous cost weight was not justified because Productivity Commission data showed there was no difference in the average time spent in OOHC by Indigenous and non-Indigenous children.
- 116 The Commission has concluded that there are no reliable data to judge the case for an Indigenous cost weight in the child protection and family services assessment.

Homelessness rates and low SES

- 117 Western Australia argued that homelessness expenses, which are included in the other welfare component, should not be assessed using a low SES measure because the causes of homelessness are many and varied. It argued that while homelessness has a significant association with low SES backgrounds, not all homeless persons have a low SES background, and the propensity of low SES background persons to be homeless may vary from State to State. Western Australia therefore argued for an EPC assessment of homelessness expenses and more generally for other welfare expenses, since homelessness expenses form the largest part of the component.
- 118 The Commission accepts the case that homelessness is due to a number of factors. However, given that total homelessness expenses are relatively small (less than \$1 billion) and data on the characteristics of people using other welfare services, including homelessness services are limited, low SES (combined with wage and regional cost differences) is a reasonable broad measure of disabilities across the whole other welfare component. Western Australia acknowledges that homelessness has a significant association with low SES backgrounds. The Commission will therefore retain low SES as a measure of disability for other welfare expenses, including homelessness.

REDISTRIBUTION FROM AN EPC ASSESSMENT

- 119 Table 16 shows the extent to which the assessment for this category differs from an EPC assessment of welfare expenses. States with a positive redistribution are assessed to have above average spending requirements and States with a negative redistribution are assessed to have below average spending requirements. In per capita terms, Tasmania, the ACT, and the Northern Territory and experience the largest redistributions.

Table 16 Redistribution from an EPC assessment, Welfare, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	25	-571	247	4	53	75	-59	226	630
\$ per capita	3	-89	50	2	31	142	-141	914	25

Note: The redistribution is the difference from an EPC assessment of category expenses.

Source: Commission calculation.

120 Table 17 provides a summary of the main disabilities contributing to the redistribution from an EPC assessment for this category.

Table 17 Major reasons for the redistribution, Welfare, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Child protection and family services									
SDC	27	-415	222	25	-24	34	-36	166	474
Regional costs	-28	-30	17	24	6	1	-2	13	60
Wage costs	7	3	-3	-3	-6	-2	3	1	14
Sub-total	-9	-444	227	41	-27	31	-36	216	516
NDIS	37	-91	-2	3	36	17	-3	4	97
Non-NDIS disability services and aged care									
Concessions	-20	-13	21	-23	34	19	-15	-3	74
Other welfare									
SDC	4	-17	6	-15	10	9	-5	7	36
Regional costs	12	-8	-4	-2	1	0	0	1	14
Wage costs	1	0	0	0	-1	0	0	0	1
Sub-total	17	-24	1	-16	11	8	-5	8	45
Total	25	-571	247	4	53	75	-59	226	630

Note: The redistributions from an EPC assessment are illustrative. Disabilities may not add up due to rounding.

Source: Commission calculation.

121 The main reasons for these redistributions are the differences between States in the proportions of their populations in the groups that are high users of welfare services. In addition, differences between States in the cost of wage related inputs to welfare services contribute to the differences between States. High or costly users of welfare services are Indigenous people, children and people living in areas of relative disadvantage (that is, with low SES).

122 The main reasons for the redistributions for each State are as follows.

- Victoria has a low share of Indigenous people. In addition, it has a relatively low share of the low SES population.
- Queensland has a relatively high share of Indigenous people and also a greater than average proportion of children.

- Western Australia has below average assessed service expenses because it has a relatively low share of the low SES population, but that is significantly offset by a relatively high Indigenous population and costs associated with providing services to different areas within the State.
- South Australia and Tasmania have above average assessed service expenses mainly due to their relatively high shares of the low SES population. Tasmania also has a somewhat higher share of Indigenous people.
- The ACT's below average assessed service expenses reflect its relatively low share of the low SES population.
- The high assessed service expenses for the Northern Territory reflect its high share of the low SES Indigenous population, which draws disproportionately on welfare services. It also faces relatively high costs associated with providing services to different areas within the State.

123 Table 18 shows State proportions of Indigenous people, children aged 0-14 and people from a low SES background.

Table 18 State proportions of selected population groups, June 2018

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Average
	%	%	%	%	%	%	%	%	%
Indigenous share of population	3.5	0.9	4.6	4.0	2.5	5.6	1.9	30.6	3.3
0-14 share of population	18.7	18.5	19.6	19.5	17.8	17.9	19.0	21.8	18.8
Low SES share of population	41.0	37.2	41.8	33.2	51.9	55.8	7.8	30.1	39.8

Note: Low SES comprises people in the bottom two quintiles of IRSEO and NISEIFA.

Source: ABS, *Regional Population by Age and Sex, Australia*, Cat. No. 3235.0.

UPDATING THE ASSESSMENT

124 As required by the terms of reference, the Commission will incorporate the latest available data in the assessment during the annual updates. This will allow the assessment to reflect changes in State circumstances.

- The Commission will update the following data annually:
 - Productivity Commission data on recurrent expenditure on child protection and out-of-home care services (used to split child protection and family services expenses between child protection services and out-of-home care services)
 - AIHW data on Indigenous and non-Indigenous substantiations and out-of-home care service user numbers
 - AIHW substantiations data broken down by SES and remoteness categories, for Indigenous and non-Indigenous children, aggregated across States for which these breakdowns are available, using IRSEO and

- NISEIFA (the breakdowns are of children who were the subjects of substantiations, by SES and remoteness category at notification, based on postcode at the time of the first notification that was substantiated)
- the anticipated NDIS share of disability expenses in the application year (disability expenses in each of the three assessment years will be split between NDIS and non-NDIS disability services expenses in the respective proportions for the application year)
 - Centrelink and Department of Veterans' Affairs data on the number of PCC plus HCC holders by State (used in the assessment of concessions).
 - Some of the assessment data are not readily available on an annual basis, or remain stable over time. The Commission will not be updating these data during the review period:
 - it is not expected that the ABS will release a new household or individual level index for socio-economic disadvantage in the review period.

OUTSTANDING ISSUES

125 There are no outstanding issues for the Welfare assessment.

FURTHER CONSULTATION

126 Before the release of the final report by 28 February 2020, there will be opportunities for consultation on this assessment. For further information about this category, please contact Hayley Purdon on hayley.purdon@cg.gov.au.

ATTACHMENT 14

HOUSING

Summary of proposed changes to the 2015 Review methodology

- The Housing assessment is mostly unchanged from the 2015 Review approach.
- The Commission is requesting data from States to update the Indigenous cost weight and regional costs gradient for the social housing assessment. In addition, data on the split between maintenance and other social housing expenses will be requested to update the expense weights for constructing the regional costs factor.
- Tax expenditures on concessional rates of conveyance duty for first home owners are assessed in the Stamp duty on conveyances category. First home owner grants are assessed in this category.

- 1 This attachment contains the Commission’s draft proposals for the Housing category following consultation with the Commonwealth and States.

SERVICE OVERVIEW

- 2 State net expenses on Housing were \$3.0 billion in 2017-18, representing 1.4% of total State expenses (Table 1). State spending on this function comprises expenses for:
 - all social housing services provided by the general government sector and public non-financial corporations (PNFCs) and subsidies to community housing providers
 - First Home Owner Grants
 - private rental assistance and other forms of home purchase assistance

Table 1 State expenses on Housing by State, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Total expenses (\$m)	920	601	592	467	125	64	27	234	3 029
Total expenses (\$pc)	116	94	119	181	72	123	65	948	122
Proportion of operating expenses (%)	1.4	1.2	1.3	1.9	0.8	1.3	0.7	4.3	1.4

Note: Expenses shown on a net basis.

Source: Commission calculation using State budget data.

3 The category excludes spending on:

- accommodation for State employees, such as teachers and police officers in remote areas, which is assessed in the relevant functional categories
- residential institutions mainly providing living quarters for people with special needs, such as the young or the disabled, which is assessed in the Welfare category
- tax expenditures on concessional rates of conveyance duty for first home owners, which are assessed in the Stamp duty on conveyances category
- homeless persons assistance, which is assessed in the Welfare category.

4 Table 2 shows the share of State expenses on housing from 2014-15 to 2017-18.

Table 2 State expenses on Housing, 2014-15 to 2017-18

	2014-15	2015-16	2016-17	2017-18
Total expenses (\$m)	2 419	2 197	2 738	3 029
Proportion of total operating expenses (%)	1.3	1.1	1.3	1.4

Note: Expenses shown on a net basis.

Source: Commission calculation using ABS Government Finance Statistics (GFS) and State budget data.

5 User charges, dominated by revenue from rents for social housing, were \$3.3 billion in 2017-18 (see Table 3). Unlike other expense categories, needs in regards to revenue from rents are assessed as a separate component in the Housing category.¹

¹ Housing is the only expense category that includes an explicit revenue assessment.

Table 3 Housing, rent revenue, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Revenue (\$m)	1 344	486	416	560	316	49	103	38	3 312
Revenue (\$pc)	170	76	84	217	183	93	248	156	134

Note: Rent revenue or user charges refer to revenue from the sale of goods and services classified in GFS to economic type framework (ETF) 112.

Source: Commission calculation using ABS GFS and State budget data.

State roles and responsibilities

6 There are four types of social housing.

- Public housing encompasses the public rental housing owned or leased by State governments. Most States provide public housing through public housing authorities classified to the State PNFC sector, but Queensland, Tasmania and the Northern Territory provide it through State government departments.
- State-owned and managed Indigenous housing (SOMIH) that are available in New South Wales, Queensland, South Australia, Tasmania and the Northern Territory.
- Indigenous community housing organisation (ICHO) dwellings. All States (except the ACT) have ICHOs delivering housing services to Indigenous households.
- Mainstream community housing managed by not-for-profit organisations, which receive subsidies from State governments, offer medium or long-term tenure for low-income individuals and families.

7 The share of social housing dwellings provided by public housing authorities has been falling over the decade to 2018, while the share of mainstream community housing and SOMIH has been increasing. As at June 2018, 76% of social housing dwellings are provided through public housing authorities. Table 4 shows the distribution of social housing dwellings by program.

Table 4 Social housing dwellings by program

	June 2013	June 2018	Percentage growth	Dwellings as a share of total, 2018
	No.	No.	%	%
Public housing	328 340	316 231	-3.7	72.7
SOMIH	10 084	14 686	45.6	3.4
Community housing	67 385	87 819	30.3	20.2
ICHO (a)	15 394	16 030	4.1	3.7
Total	421 203	434 766	3.2	100.0

(a) Figures are 2017, 2018 data are not available.

Source: Productivity Commission, 2019, *Report on Government Services 2018*, Table 18A.3.

Commonwealth roles and responsibilities

- 8 The Commonwealth provided funding to the States for housing under the National Affordable Housing Agreement (NAHA) through the National Affordable Housing Special Purpose Payment (SPP). From 1 July 2018, the NAHA (including the National Affordable Housing SPP) was replaced by the National Housing and Homelessness Agreement (NHHA).² Table 5 shows the main Commonwealth payment to the States for housing in 2017-18.
- 9 Other Commonwealth payments related to housing infrastructure (including national partnership agreements related to remote housing) are discussed in Attachment 21 — Investment.

Table 5 Commonwealth payments to the States for Housing, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
National Affordable Housing SPP (a) (\$m)	435	351	273	142	95	29	23	14	1 360
Total (\$m)	435	351	273	142	95	29	23	14	1 360
Total (\$pc)	55	55	55	55	55	55	55	55	55

Note: Table shows major payments only. Commonwealth own purpose expenses (COPEs) are not included. Payments that the Commission treats as ‘no impact’ are included in the table. Table may not add due to rounding.

(a) From 2018-19, the National Housing and Homelessness Agreement will replace this payment.

Source: Commonwealth *Final Budget Outcome, 2017-18*.

- 10 The complete list of Commonwealth payments and their treatment is available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).³
- 11 Other Commonwealth funding includes Commonwealth Rent Assistance (delivered through social security) and the National Rental Affordability Scheme (NRAS), under which financial incentives are issued to organisations that provide people on low to moderate incomes with an opportunity to rent homes at a rate that is at least 20% below market value rent. Payments will cease in 2026 and incentives are mostly tax offsets.

² The National Partnership Agreement on Homelessness will also be replaced by this Agreement. Homelessness expenses are assessed in the Welfare category.

³ Most Commonwealth payments to the States affect the grant distribution but some do not. The Commission refers to payments that affect the grant distribution as ‘impact’ payments. For more information, see Attachment 2 — Commonwealth Payments.

CATEGORY STRUCTURE

- 12 The assessment of the Housing category is undertaken in three components:
- social housing expenses
 - rent revenue
 - first home owner grants.
- 13 Components allow different disability assessments to apply to sub-functions.
- 14 Table 6 shows the category's assessment structure, the size of each component and the disabilities that apply.

Table 6 Category structure, Housing, 2017-18

Component	Component expense	Disability	Influence measured by disability
	\$m		
Social housing expenses	5 713	Socio-demographic composition	Recognises that income, Indigenous status and remoteness affect the use of housing services. In addition, an Indigenous cost weight is applied.
		Wage costs and regional costs	Recognises the differences in wage costs between States and in the cost of providing services to different areas within a State.
Revenue	-3 312	Socio-demographic composition	Recognises that income, Indigenous status and remoteness affect the number of social housing households as well as the rent paid by households.
First home owner expenses	628	Not applicable	These expenses are not differentially assessed.

Note: Expenses and user charges are shown on a gross basis.

Source: Commission calculation using State budget data.

Category and component expenses

- 15 The main data sources for calculating category and component expenses are ABS Government Finance Statistics (GFS) and State budget data.⁴ First home owner scheme grant expenses are sourced from the States.

⁴ Unless otherwise stated, category and component expenses for the first two assessment years are sourced from ABS GFS. States provide data for the most recent assessment year because GFS data are not available in time for the annual update.

ASSESSMENT APPROACH

Social housing expenses

- 16 Expenses for this component are related to:
- public rental housing owned (or leased) and managed by State governments
 - State-owned and managed Indigenous housing (SOMIH)
 - mainstream community housing managed by not-for-profit organisations
 - Indigenous community housing organisation (ICHO) dwellings.

17 Table 7 shows the number of social housing dwellings by type and State.

Table 7 Number of social housing dwellings by type and State, 30 June 2018

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.
Public housing	111 341	64 295	51 413	33 293	32 686	7 005	11 181	5 017	316 231
SOMIH	4 603	0	3 292	0	1 449	222	0	5 120	14 686
Community housing	35 345	14 486	11 116	8 062	11 561	5 980	895	374	87 819
ICHO (a)	3 370	1 720	5 232	2 649	735	76	0	2 248	16 030
Total	154 659	80 501	71 053	44 004	46 431	13 283	12 076	12 759	434 766
Total per '000 population	20	13	14	17	27	25	29	52	18

(a) Figures are 2017, 2018 data are not available.

Source: Productivity Commission *Report on Government Services 2018*, Table 18A.3.

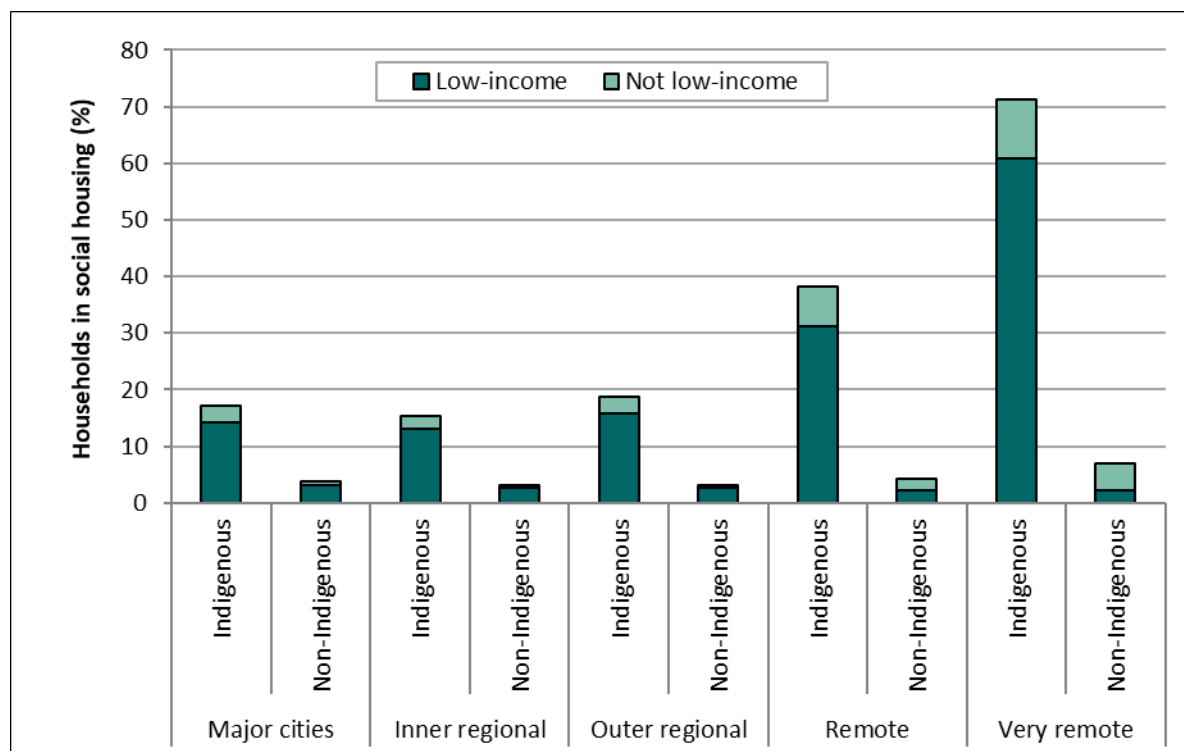
Socio-demographic composition

- 18 The assessment accepts that use for social housing is household based rather than individual based. In terms of use, a household of one is the same as a household of more than one.⁵
- 19 State spending on housing services is affected by the presence of those population groups living in households that use social housing more intensively, such as households that are:
- low-income
 - Indigenous
 - in more remote areas.
- 20 The Commission also recognise that due to larger household size, increased mobility and higher levels of overcrowding, it costs more to manage and maintain houses where Indigenous people live than those where non-Indigenous people live.

⁵ For the assessment, households do not include non-private and unoccupied dwellings.

21 Figure 1 shows the number of households in social housing as a proportion of all households by each of the socio-demographic composition (SDC) characteristics above, as reported in the 2016 Census of Population and Housing.

Figure 1 Social housing households by income, Indigenous status and region, 2016



Note: Excludes non-private and unoccupied dwellings. Those with a non-response in any of the variables are also excluded.

Source: ABS 2016, *2016 Census – Counting Dwellings, Place of Enumeration*, CensusTableBuilder. Findings based on use of ABS TableBuilder data.

22 **Low income.** Social housing in all States is designed to assist households with low incomes, and programs have eligibility limits for both household income and assets.

23 The Commission has defined low-income households as those with an equivalised income of less than \$33 799 a year (\$649 per week).⁶ An equivalised income of less than \$649 per week is similar to the average state income eligibility thresholds for access to public housing for a single person. The threshold approximately equates to the bottom 36% of households in the 2016 Census. Figure 1 shows high use of social housing by low-income households.

24 **Indigenous status.** Data on users of social housing show that Indigenous households use social housing services more than non-Indigenous households and involve higher operating costs per household than non-Indigenous households.

⁶ Equivalised household income is derived as the amount of disposable cash income that a single-person household would require to maintain the same standard of living as the household in question, regardless of the size or composition of the latter.

- 25 The 2016 Census shows that 5.7% of all households are Indigenous households whereas 15.4% of households in social housing are Indigenous households. Figure 1 shows high use of social housing by Indigenous households.
- 26 States also provide specialist programs for Indigenous households through SOMIH and ICHOs. Evidence shows it costs more to provide social housing to Indigenous households compared to non-Indigenous households. This is mainly due to larger household sizes, high mobility of the Indigenous population and overcrowding.
- 27 Overcrowding increases wear and tear, which requires additional instances of attendance by maintenance personnel. The 2016 Census shows that 10.9% of households with at least one Indigenous usual resident needed one or more extra bedrooms as compared to 3.7% of other households.
- 28 The high mobility of the remote Indigenous population necessitates additional tenancy management services to ensure that users of social housing are known, and are paying rents.
- 29 The Commission considers there is a conceptual case for including an Indigenous cost weight to recognise the higher cost of providing services to this population group. The Indigenous cost weight used for the draft report is that of the 2015 Review (30%). The Commission will collect data from States later this year to update the cost weight.
- 30 **Remote service use.** The proportion of the population in social housing also varies significantly by remoteness area, as seen in Figure 1. Service use is higher in remote areas.
- 31 Use rates of social housing are higher in remote and very remote regions compared to other regions, even allowing for higher Indigenous use. In very remote areas, over 15% of households without an Indigenous resident are managed by social housing. This is partly due to limited private rental alternatives in remote regions. Based on this evidence, the Commission intends to assess the impact of remoteness on service use.

Regional costs

- 32 The Commission will continue to recognise the higher costs of providing social housing services in remote regions, with different regional cost gradients applying to maintenance and other social housing expenses. The two gradients will be combined, using data from States on the split between maintenance and other social housing expenses, to derive the regional cost factors which will be applied to social housing expenses.
 - The regional costs gradient for maintenance expenses will be based on the Rawlinson's based capital cost gradient and the regional costs gradient for other social housing expenses. Each will have a 50% weight.

- The regional costs gradient for other social housing expenses will use State data, which the Commission will collect later this year.
- 33 The regional cost factors being used in this report are placeholders that will be replaced when State data are received. More information on this assessment can be found in Attachment 25 — Geography.
- 34 New South Wales noted that previously the Commission assessed regional costs for housing services using an extrapolation of the average regional cost loadings for police and education. It said that its Department of Family and Community Services applies a location loading in its housing resource allocation model to provide for differences in resources required in providing tenancy management services in outer regional areas relative to major cities. This cost gradient slope is significantly flatter than the one applied by the Commission.
- 35 States have informed the Commission that while they are able to provide public housing and SOMIH data by remoteness, they are mostly unable to provide this breakdown for community housing and ICHOs. The available data will provide a housing specific national gradient, which should address New South Wales’ concerns.

Wage costs

- 36 Differences in wage costs between States have a differential effect on the cost of providing services. There is a general method for measuring the influence of wage costs in components where the disability applies. For a description of the method see Attachment 24 — Wage costs.

Data and method

- 37 The SDC cost drivers taken into account are Indigenous status, remoteness and income (Table 8). The same breakdown will apply to the assessment of rent revenue, which is discussed in the next section.

Table 8 SDC breakdown, social housing expenses and revenue from rent

Indigenous status	ABS remoteness area	Income
Indigenous	Major cities	Low-income
Non-Indigenous	Inner regional	High-income
	Outer regional	
	Remote	
	Very remote	

Source: Commission decision.

- 38 Social housing use is measured using ABS Census data on the number of occupied private households in social housing⁷ disaggregated by income, Indigenous status and remoteness area.⁸ The landlord types of ‘State or Territory housing authority’ (proxy for public housing and SOMIH) and ‘Housing co-operative/community/church group’ (proxy for mainstream community housing and ICHO) are used. For years outside the Census year, the Census household data are adjusted for State population growth.
- 39 The SDC assessment is calculated in the following way.
- The number of social housing households by SDC group is multiplied by the Indigenous cost weight to derive the number of cost-weighted social housing households.
 - Total social housing expenses, for each assessment year, are apportioned among SDC groups using the share of cost-weighted social housing households to give assessed social housing expenses by SDC group.
 - The assessed expenses by SDC groups are divided by total occupied private households in each group to derive national average per household social housing expenses for each SDC group for each assessment year.
 - The per household social housing expenses by SDC group are multiplied by each State’s number of households in each group. These values are summed to derive each State’s SDC assessed expenses.
- 40 A regional costs factor and wage costs factor are then applied to SDC assessed expenses.

Component calculations

- 41 Table 9 shows the calculation of total assessed expenses for the component in 2017-18.

Table 9 Illustrative assessment, social housing expenses component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SDC assessed expenses (\$m)	1 763	1 311	1 224	602	484	138	68	123	5 713
Regional costs factor (a)	0.985	0.968	1.020	1.057	1.013	1.012	0.971	1.242	1.000
Wage costs factor	1.006	1.004	0.996	0.993	0.975	0.971	1.048	1.030	1.000
Assessed expenses (\$m)	1 739	1 268	1 239	630	476	135	69	157	5 713
Assessed expenses (\$pc)	220	199	250	244	276	257	166	637	231

(a) These regional cost factors are an interim estimation based off a general gradient and will be updated when data are received from the States. See Attachment 25 – Geography for further information.

Source: Commission calculation.

⁷ In the 2015 Review, the Census data included non-private households. They are excluded from the 2020 Review calculations.

⁸ Remoteness areas are based on the 2016 Australian Statistical Geography Standard (ASGS) Volume 5 – Remoteness Structure, Cat. No. 1270.0.55.005.

Revenue from rents

42 Revenue for this component includes rents collected from social housing households.

Socio-demographic composition

43 The assessment recognises the effects of household income, Indigenous status and remoteness on State capacities to raise revenue from rents. Again, 2016 Census data are used to measure household numbers and rent paid. Specifically:

- households on higher incomes paid more rent than those on lower incomes
- rents paid decrease with remoteness
- Indigenous households in non-remote regions paid more rent than non-Indigenous households; however, on average, Indigenous households paid slightly less rent than non-Indigenous households.

44 To account for these differences, the 2016 Census data on rents paid by occupied private dwellings is used to assess revenues raised from rent by Indigenous status, remoteness and income status.

Data and method

45 As for the SDC assessment in the social housing expenses component, the SDC cost drivers taken into account are Indigenous status, remoteness and income (Table 8).

46 The Commission has not adjusted for differences in rent collection rates for Indigenous and non-Indigenous households because Productivity Commission data show that rent collection rates are similar for Indigenous and non-Indigenous housing.⁹ In any case, it is expected that any gap should decrease as a result of States recently having taken over responsibility for Indigenous community housing. One of the expected outcomes of the National Partnership Agreement on Remote Indigenous Housing is Indigenous community housing rent reforms, leading to fair rent setting in line with that applying to public housing. This means rents will be a proportion of assessable income for a household and will be collected regularly.

47 The revenue SDC assessment is calculated using a similar method as for the social housing expenses SDC assessment.

- The number of social housing households by SDC group is divided by the total number of social housing households to give the share of social housing households by SDC group.
- Total revenue, for each assessment year, is apportioned among SDC groups using the share of social housing households weighted by relative rent paid per group to give assessed revenue by SDC groups.

⁹ Productivity Commission *Report on Government Services*, 2017.

- The assessed revenue by SDC group is divided by the total number of households in each group to calculate the national average per household rent paid by different types of households for each assessment year.
- The per household revenue by SDC groups is multiplied by each State's number of households in each group. These values are summed to give each State's assessed revenue.

Component calculations

48 Table 10 shows the calculation of total assessed revenue for the component in 2017-18.

Table 10 Illustrative assessment, revenue from rents component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Assessed revenue (\$m)	1 042	795	689	343	281	72	45	45	3 312
Assessed revenue (\$pc)	132	125	139	133	163	137	108	181	134

Source: Commission calculation.

First home owner expenses

49 Expenses for this component include:

- grants under the First Home Owner Grant scheme
- additional grants to first home owners.

50 This component excludes tax expenditure on concessional rates of conveyance duty for first home owners. These concessions are assessed in Stamp duty on conveyances (see Attachment 5).

Data and method

51 First home owner expenses are assessed on an equal per capita (EPC) basis because no reliable policy neutral measure of first home owner expenses could be identified. State expenses are sourced from the States.

Component calculations

52 Table 11 shows the calculation of total assessed expenses for the component in 2017-18.

Table 11 Illustrative assessment, first home owner expenses component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Assessed expenses (\$m)	201	162	126	66	44	13	11	6	628
Assessed expenses (\$pc)	25	25	25	25	25	25	25	25	25

Source: Commission calculation.

CATEGORY CALCULATIONS

53 Table 12 brings the assessed expenses for each component together to derive the total assessed expenses for each State for the category. It shows at the component level how each disability assessment moves expenses away from an EPC distribution to obtain total assessed expenses.

Table 12 Illustrative category assessment, Housing, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Social housing expenses									
EPC	231	231	231	231	231	231	231	231	231
SDC assessed expenses	-8	-25	16	3	49	32	-67	269	0
Regional costs	-3	-7	5	13	3	3	-7	56	0
Wage costs	1	1	-1	-2	-6	-7	11	7	0
Assessed expenses	220	199	250	244	276	257	166	637	231
Revenue									
EPC	-134	-134	-134	-134	-134	-134	-134	-134	-134
SDC assessed expenses	2	9	-5	1	-29	-3	26	-48	0
Assessed expenses	-132	-125	-139	-133	-163	-137	-108	-181	-134
First home owner expenses									
EPC	25	25	25	25	25	25	25	25	25
Assessed expenses	25	25	25	25	25	25	25	25	25
Total assessed expenses	113	99	136	136	138	146	83	481	122

Note: Table may not add due to interactions between disabilities and rounding. The EPC and assessed expenses are total spending per capita. The amounts for each disability are redistributions from an EPC assessment.

Source: Commission calculation.

INFRASTRUCTURE ASSESSMENT

54 States require infrastructure to support service delivery. State infrastructure requirements are assessed in the Investment category. The assessment of investment in housing related infrastructure is based on the cost weighted number of households in social housing derived for the social housing component. The Indigenous cost weight affects State housing infrastructure requirements for Indigenous tenants (SOMIH and dwellings managed by funded ICHOs) because this type of housing is often larger and with more expensive specifications than public housing or mainstream community housing. The Indigenous cost weight is not applied to Indigenous tenants in mainstream housing.

- 55 The first home owner assessment, and the revenue assessment do not affect State infrastructure requirements.
- 56 Interstate differences in construction costs are also recognised.
- 57 For a description of the investment assessment, see Attachment 21 — Investment.

ASSESSMENT ISSUES

- 58 The 2015 Review assessments provided the starting point for the 2020 Review. In April 2018, Commission staff released a draft assessment paper setting out staff proposals for the Housing category. States provided submissions on the proposals. The staff proposals and State submissions are available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).
- 59 The main assessment issues for the category were:
- whether to align Census data with Australian Institute of Health and Welfare (AIHW) data on social housing
 - the effect of land costs on the provision of social housing
 - treatment of affordable housing expenses
 - first home owners expenses
 - updating the Indigenous cost weight and maintenance cost weight.
- 60 The following sections discuss the main issues for the category, including State views.¹⁰

Aligning Census data with AIHW data

- 61 The 2016 Census undercounts the number of households in social housing as many social housing tenants appear to incorrectly identify their type of landlord. The AIHW data on the number of households in social housing are more accurate because they are collected directly from service providers. The Commission investigated the possibility of scaling the more detailed Census data to accord with data collected from the AIHW.
- 62 Commission analysis showed that scaling the Census data on the number of households living in social housing did not have a material impact on the assessment. Therefore, the Commission intends to retain the 2015 Review methodology of estimating the use of social housing by income, Indigeneity and region, which is based on the Census numbers of households in social housing.

¹⁰ State submissions often include significant detail and supporting evidence. In this attachment, the Commission responds to the arguments and evidence States presented in their submissions. For the full detail of State submissions, see the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

Treatment of housing related land acquisition expenses

- 63 New South Wales said that the user cost of land is the most significant element in the provision of social housing in urban areas. It argued that higher underlying land prices in metropolitan Sydney result in higher housing rental prices compared to markets in other States, and this should be recognised in the assessment.
- 64 Victoria added that high land prices increased the cost of housing for all residents, which directly increased the demand for social housing and homelessness services for low-income households.
- 65 The Commission does not intend to make a differential assessment of expenditure on housing related land because recurrent expenses would not be affected directly by land prices and net investment in land (in the Housing category) is too small for an assessment to be material.
- 66 While the value of land may differ between States, it would not affect the recurrent cost of providing services.
- 67 Victoria did not provide evidence to support its argument and the Commission does not have fully comparable information on the number of applicants for social housing processed by each State. Data available from the Productivity Commission *Report on Government Services 2019* did not lend support to Victoria’s argument. Table 13 presents data that describe the social housing provision environment and median house prices across Australia.

Table 13 State social housing provision and houses prices, 2016-17

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ave
Capital city – median established house prices (\$'000)	910	706	540	490	472	462	720	505	--
Allocation of public housing to those in greatest need (%)	59.7	81.8	96.9	52.8	85.6	97.9	98.6	58.2	74.3
Major cities – social housing households per 1 000 population	12	8	7	9	17	--	26	--	10
Total – social housing households per 1 000 population	19	12	14	16	26	25	28	30	17

Source: AIHW social housing dwellings (2016-17), cat. no. 6416.0 *Residential Property Price Indexes: Eight Capital Cities*, December 2018 (ABS), and Productivity Commission, *Report on Government Services 2018*.

- 68 New South Wales has the highest median house price and approximately 60% of its social housing allocations are to those in greatest need,¹¹ nearly 15% below the national average. While Victoria does allocate social housing to high priority clients at

¹¹ Greatest need households are defined as households that at the time of allocation are homeless, in housing inappropriate to their needs, in housing that is adversely affecting their health or placing their life and safety at risk, or, have very high rental housing costs.

a rate higher than the national average, part of this would be related to its low quantity of social housing stock. In comparison, South Australia has one of the lowest median house prices and approximately 86% of its social housing allocations are for high priority clients. There appears to be no direct link between house prices and allocation of social housing to those in greatest need.

- 69 There is also minimal evidence to support the argument that States provide more social housing services in response to higher demand due to high land and house prices. Table 13 shows that there is little correlation between house prices and the level of social housing provision. For example, the two States with the lowest capital city house prices have above average levels of social housing per capita, while Victoria has the second highest capital city house prices but a low level of social housing per capita.
- 70 The reasons for homelessness are complex, making it difficult to establish a relationship between high land prices and homelessness. Homelessness expenses are assessed in the Welfare category using a low socio-economic status measure as a broad indicator of needs.

Treatment of affordable housing expenses

- 71 Commonwealth and State governments are giving greater policy and funding attention to affordable housing.¹² The Commission investigated whether a separate assessment of expenses relating to affordable housing should be made but is inclined not to make an assessment because there are no data on the size of State expenses and the target population. As requested by the ACT, the Commission reviewed the availability of data sources but could not identify comprehensive and consistent datasets. The Commission notes that the ACT did not provide any data sources.

First home owner expenses

- 72 The Commission intends to retain the EPC assessment of first home owner expenses for the 2020 Review. As requested by the ACT, the Commission reviewed the availability of data for assessing State needs but could not identify comprehensive and consistent datasets. The Commission notes that the ACT did not provide any data sources.
- 73 The Commission intends to no longer include tax expenditures on concessional duties for first home owners in this component. The issue is addressed in Attachment 5 — Stamp duty on conveyances.

¹² Affordable housing refers to housing targeted at low to moderate income households with rents set as a proportion of market rent.

Updating the Indigenous cost weight and maintenance expense weight

- 74 The Commission will send a data request to update the Indigenous cost weight and maintenance expense weight. In response to Western Australia and the Northern Territory's argument that the current cost weights are dated, the Commission will seek data by remoteness to capture any differences in the cost of providing social housing to remote Indigenous households.
- 75 Tasmania argued that there was no material difference in the cost of providing housing for non-Indigenous tenants compared to Indigenous tenants in its State. The Commission intends to collect data from all States and the Indigenous cost weight will reflect the average of what States do.
- 76 For the draft report, the Commission used the 2015 Review Indigenous cost weight and maintenance expense weight.

OTHER ISSUES CONSIDERED BY THE COMMISSION

- 77 There were a number of other issues considered by the Commission, largely in response to concerns raised by States. These issues related to the method for measuring existing disabilities or requests for new disabilities that were not included in the 2015 Review assessment. The main reasons for not assessing certain disabilities identified by States are:
- the conceptual case for a disability has not been established
 - an assessment would not be material, that is, redistribute more than \$35 per capita for any State¹³
 - data are not available to make a reliable assessment.

Recognition of clients with culturally and linguistically diverse (CALD) backgrounds

- 78 The effect of a CALD disability on the assessment is very small and not material across other categories. Therefore, the Commission intends not to assess a CALD disability in Housing.
- 79 New South Wales made a case that social housing use rates for people from CALD backgrounds are higher than people that are not from CALD backgrounds. It argued

¹³ The Commission has set a materiality threshold for including a disability. The materiality test applies to the total impact the disability has on the redistribution across all revenue or expense categories in which it is assessed. To be included, a disability assessment must redistribute more than \$35 per capita away from an equal per capita assessment for any State.

that additional resources are required to service CALD clients and that service provision to these communities should be recognised as a disability in the Housing assessment.

- 80 For non-Indigenous individuals in non-remote areas and Indigenous individuals in remote areas, those not proficient in English use social housing more than those who are proficient in English.¹⁴
- 81 Given that the highest use rates for those not proficient in English are for non-Indigenous individuals in non-remote areas (mostly likely households from CALD backgrounds), the Commission considers this confirms that there is a case to consider a differential assessment for CALD households in the Housing assessment.
- 82 A CALD assessment based on English language proficiency has the largest effect on the Northern Territory as a result of its remote Indigenous populations. However, this disability is, at least, partially captured in the Indigenous cost weight and a broad CALD assessment would likely double-count needs.
- 83 In any case, the effect on the assessment is not material. The Commission's usual approach is that, if a disability is material across all assessments, it would be assessed in every category where a case is established regardless of the materiality of individual assessments. A CALD disability is not material across all assessments and so the Commission does not intend to assess it in this category.

Applying an Indigenous adjustment to the rental revenue component

- 84 The Commission intends to retain the 2015 Review method of assessing revenue from rents component.
- 85 Queensland argued for an Indigenous adjustment to be applied to the rental revenue component of the Housing assessment. It said that Indigenous households living in State housing are twice as likely to be in rental arrears compared to non-Indigenous households. It estimated that, in Queensland, approximately 20% of Indigenous households are in rental arrears compared to 9% of non-Indigenous households. These households account for over \$1 million and \$0.6 million in social housing arrears, respectively. As such, Queensland considered that there should be an Indigenous adjustment in the rental revenue assessment to account for this.
- 86 In the figures provided by Queensland, the differential in rent arrears between Indigenous and non-Indigenous renters is \$0.4 million. An assessment of this would

¹⁴ Data shows the opposite for Indigenous individuals in non-remote areas and non-Indigenous individuals in remote areas.

not be material. In addition, it would be expected that States would eventually recover at least some of the unpaid rents.

Recognition of clients with disability

- 87 People with disability are more likely to be on low incomes, and Indigenous people are more likely to have a disability compared with non-Indigenous people.¹⁵ Given that income and Indigeneity are captured in the socio-demographic composition assessment and that no sufficiently comprehensive data on the use of social housing by people with disability are available, the Commission does not intend making an assessment.
- 88 Queensland argued that additional services are required for persons with high or very high disability related needs; 70% of all applicants on Queensland's housing register are characterised as having high or very high needs and 90% of new households in government owned and managed social housing are in high or very high need categories. Moreover, 50% of all social housing households have a person with a disability.
- 89 Tasmania also presented a case for the recognition of individuals with disability in the Housing assessment, maintaining that it has the highest rate of any State of people with a disability. This increases costs related to servicing the demand for modified housing required by this client base. It also argued that the NDIS is creating demand for more social housing through increasing expectations for independent living as an outcome of the scheme.
- 90 Under the National Affordable Housing Agreement (NAHA), States need to give priority for social housing to those in greatest need. Therefore it is to be expected that those with high needs are using social housing. Further, new tenancies make up a small proportion of social housing stock.
- 91 There are no comprehensive data on the disability status of tenants, although the Productivity Commission's *Report on Government Services 2018* reports that between 43.2% and 60.7% of new tenancies are allocated to households with special needs, depending on the housing type.

REDISTRIBUTION FROM AN EPC ASSESSMENT

- 92 Table 14 shows the extent to which the assessment for this category differs from an EPC assessment of housing expenses. States with a positive redistribution are assessed to have above average spending requirements and States with a negative redistribution are assessed to have below average spending requirements. In per

¹⁵ AIHW, *Aboriginal and Torres Strait Islander Health Performance Framework (HPF) report 2018*.

capita terms, the Northern Territory and the ACT experience the largest redistributions.

Table 14 Redistribution from an EPC assessment, Housing, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	-71	-146	69	36	28	13	-16	88	233
\$ per capita	-9	-23	14	14	16	24	-39	358	9

Note: The redistribution is the difference from an EPC assessment of category expenses.

Source: Commission estimate.

- 93 The main reasons for these redistributions are the differences between States in service provision to those assessed as having higher costs such as Indigenous people, those of low-income status and those in remote areas.
- New South Wales has a lower than average proportion of households in remote areas. This is partly offset by its relatively higher wage costs and its relatively greater share of low-income households and Indigenous households.
 - Victoria has a lower than average proportion of Indigenous households and households in remote and very remote regions. It has an above average proportion of low-income households.
 - Queensland and Western Australia have higher than average proportions of Indigenous households and more households in remote and very remote regions. This is partly offset by below average proportions of low-income households.
 - South Australia has above average proportions of low-income households and households in remote and very remote regions. This is partly offset by relatively low wage costs and a below average proportion of Indigenous households.
 - Tasmania has above average proportions of Indigenous households and above average proportions of households on low incomes. While it has an above average proportion of households in remote and very remote regions, these are mainly non-Indigenous households, which have a low use of social housing. It also has relatively low wage costs.
 - The ACT has a relatively small low-income population with fewer than average Indigenous households and no remote locations. This is partly offset by somewhat higher wage costs.
 - The Northern Territory has a higher than average proportion of Indigenous households as well as a higher than average proportion of households in remote and very remote regions. This is partly offset by its below average proportion of low-income households.
- 94 Table 15 provides a summary of the main disabilities contributing to the redistribution from an EPC assessment for this category.

Table 15 Major reasons for the redistribution, Housing, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Social housing expenses									
SDC assessed expenses	-64	-162	79	6	85	17	-28	66	254
Regional costs	-27	-47	23	34	5	2	-3	14	78
Wage costs	11	5	-5	-4	-10	-4	5	2	22
Sub-total	-88	-205	94	34	78	14	-27	100	320
Revenue	17	59	-25	2	-50	-2	11	-12	88
First home owner expenses	0	0	0	0	0	0	0	0	0
Total	-71	-146	69	36	28	13	-16	88	233

Note: The redistributions from an EPC assessment are illustrative. Disabilities may not add due to rounding.

Source: Commission calculation.

UPDATING THE ASSESSMENT

95 As required by the terms of reference, the Commission will incorporate the latest available data in the assessment during the annual updates. This will allow the assessment to reflect changes in State circumstances.

- The following data will be updated annually:
 - ABS GFS data on housing expenses and revenue
 - First Home Owner Grant scheme expenses.
- Some of the assessment data are not readily available on an annual basis, or remain stable over time. These data will not be updated during the review period:
 - household numbers and rent paid by households will be updated when 2021 Census data or equivalent data are available.

OUTSTANDING ISSUES

96 The Commission will request data from States to update the Indigenous cost weight, regional costs gradient and maintenance expense weights.

FURTHER CONSULTATION

97 Before the release of the final report by 28 February 2020, there will be opportunities for consultation on this assessment. For further information about this category, please contact Hayley Purdon on hayley.purdon@cg.gov.au.

ATTACHMENT 15

SERVICES TO COMMUNITIES

Summary of proposed changes to the 2015 Review methodology

- Electricity subsidies and water subsidies are separately assessed.
- The following changes apply to the electricity subsidies assessment.
 - The definition of remote communities has changed. The new definition is communities in a remote or very remote area with a population of over 50 people and a population density of at least 60 persons per km².
 - The regional costs assessment has changed. The new assessment applies regional cost weights to the population in very remote communities. The cost weights are derived from regression analysis of State subsidy data.
 - The proportion of remote community electricity subsidies and other electricity subsidies will be updated annually using State data.
- The following changes apply to the water subsidies assessment.
 - The definition of small communities has changed. The new definition is communities outside of major cities with a population of over 50 but less than 1 000 people and a population density of at least 60 persons per km².
 - The regional cost assessment has changed. The new assessment applies regional cost weights to the population in small communities. The cost weights are derived from State subsidy data.
 - The proportion of small community water subsidies and other water subsidies will be updated annually using State data.
- Indigenous community development expenses are derived using State data.
- Indigenous community development expenses includes general revenue grants to Indigenous councils.
- Changes to the Government Finance Statistics (GFS) classification mean that national parks and wildlife expenses are now included in this category.

- 1 This attachment contains the Commission's draft proposals for the Services to communities category following consultation with the Commonwealth and States.

SERVICE OVERVIEW

2 State expenses on services to communities were \$7.0 billion in 2017-18, representing 3.2% of total State expenses (Table 1). State spending on this function comprises expenses for:

- subsidies for the provision of electricity services
- subsidies for the provision of water and wastewater services
- Indigenous community development
- other community development
- expenses related to environmental protection services, including national parks and wildlife.

Table 1 State expenses on Services to communities by State, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Total expenses (\$m)	1 792	1 757	1 054	1 267	649	31	78	368	6 995
Total expenses (\$pc)	226	275	212	490	376	59	188	1 491	282
Proportion of operating expenses (%)	2.7	3.5	2.4	5.0	4.2	0.6	1.9	6.8	3.2

Note: Expenses shown on a gross basis.

Source: Commission calculation using State budget data.

3 The category excludes:

- concession payments for electricity and water (for example, to pensioners and churches), which are assessed in the Welfare category
- regulation expenses for the electricity and water sectors, and expenses related to irrigation and other industrial uses of water, which are assessed in the Services to industry category
- expenses to fund the construction of housing, industrial buildings, public utilities or any other facilities, which are assessed in the Investment category
- public housing services or economic development expenses, which are assessed in the Housing and Services to industry categories respectively.

4 Table 2 shows the share of State expenses on services to communities from 2014-15 to 2017-18.

Table 2 State expenses on Services to communities, 2014-15 to 2017-18

	2014-15	2015-16	2016-17	2017-18
Total expenses (\$m)	7 133	7 580	7 636	6 995
Proportion of total operating expenses (%)	3.8	3.9	3.8	3.2

Note: Expenses shown on a gross basis.

Source: Commission calculation using ABS Government Finance Statistics (GFS) and State budget data.

- 5 User charges were \$2.3 billion in 2017-18 and mainly include environmental licences and waste management levies. In this category, user charges are assessed on an equal per capita (EPC) basis in the Other revenue category.
- 6 There is no revenue related to electricity and water subsidies because the revenue generated from these services is recorded as income by the private or government business enterprises responsible for delivering services. Table 3 shows user charges from Services to communities in 2017-18.

Table 3 Services to communities user charges, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Revenue (\$m)	186	888	605	289	197	35	48	36	2 284
Revenue (\$pc)	23	139	122	112	114	66	116	148	92

Note: User charges refer to revenue from the sale of goods and services classified in GFS to economic type framework (ETF) 112.

New South Wales has below average user charges for other community development and environmental protection. It has leased its land registry services which are State-owned in other States, and a number of national parks.

Source: Commission calculation using ABS GFS and State budget data.

State roles and responsibilities

Electricity

- 7 State governments and their wholly owned electricity businesses are major players in the electricity market. In Western Australia, Tasmania and the Northern Territory, the State government has majority-ownership of all electricity market components, which include the generation, transmission, distribution and retail sectors. In the ACT, ownership of market components, and the majority of the retail sector, is shared between the State government and a private company. In Queensland, the State government has a majority-ownership of the generation, transmission and distribution components. In New South Wales, Victoria and South Australia, the electricity market components are all privately owned or leased on a long-term basis.
- 8 State governments also have a role in regulating the industry, setting prices and providing operating subsidies.
- 9 The National Electricity Market (NEM) is a wholesale generation market and operates across New South Wales, Victoria, Queensland, South Australia, Tasmania and the

ACT, although not all areas of Queensland, South Australia and Tasmania are covered. Communities in areas outside the NEM are serviced either by smaller non-interconnected networks or by isolated generators.

- 10 Western Australia and the Northern Territory have a range of independent systems, clustered around major users. Smaller and isolated communities are serviced by specialist providers, such as through the Indigenous Essential Services program in the Northern Territory.
- 11 In this attachment, the term 'on-grid' refers to a community that is connected either to the NEM or one of the electricity networks in Western Australia or the Northern Territory. The term 'off-grid' refers to all other communities.
- 12 States differ greatly in their subsidy policies, resulting in very different patterns of spending. States fall into four broad groups.
 - In New South Wales, Victoria and the ACT, no ongoing subsidies are provided, and costs are fully recovered via user charges.
 - South Australia and Tasmania provide subsidies for a small number of off-grid communities.
 - Queensland provides subsidies for both off-grid communities, and on-grid regional communities outside south east Queensland. The regional network provider, Ergon Energy, has a partial connection to the national grid, and also services isolated communities with stand-alone generators. All small customers serviced by Ergon Energy are subsidised. The subsidy for on-grid customers reflects the higher distribution costs in areas outside south east Queensland where population density is lower. Off-grid Ergon Energy customers receive a higher subsidy than its on-grid customers.
 - The Northern Territory provides subsidies for all areas, including Darwin; however, subsidies are greater in regional and remote areas. Western Australia previously followed this pattern but discontinued metropolitan subsidies from 2018-19 onwards.
- 13 Table 4 shows the level of subsidies paid by States. The Northern Territory, Western Australia and Queensland provide the highest subsidies per capita, and also have the largest off-grid populations. State spending on electricity subsidies has been falling in recent years, mainly due to a decline in the subsidy for the South West Interconnected System (SWIS) electricity network in Western Australia.¹

¹ The SWIS network services over 90% of Western Australia's population and includes the Perth metropolitan area.

Table 4 State subsidies for electricity services, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Expenses (\$m)	0	0	472	309	10	10	0	206	1 007
Expenses (\$pc)	0	0	95	120	6	18	0	834	41

Source: State provided data for the 2019 Update and 2020 Review.

Water and wastewater

- 14 The way in which water is managed and supplied varies considerably across the country. Western Australia, South Australia, Tasmania, the ACT and the Northern Territory are all mainly serviced by one utility that provides water services to most or all regions within the State. New South Wales, Victoria and Queensland are serviced by a few large utilities in the capital cities and by a number of smaller, mostly local government based, utilities in the regional areas. Each services a specific area of the State.
- 15 Water is extracted from a number of sources such as surface water, groundwater, desalinated seawater and treated wastewater. For most States, surface water is the primary source with the other three used as a backup. In Western Australia and the Northern Territory, only the capital cities have access to high quality surface water while the regional areas rely on groundwater. In Perth, desalinated seawater complements surface water supplies. South Australia sources most of its water from the Murray River and provides it across the State through a series of pipelines. Areas of South Australia not serviced by these pipelines rely on groundwater.
- 16 Water providers are also typically responsible for wastewater services.
- 17 State governments play a large role in providing water and wastewater services. For most States, the major bulk water suppliers and bulk water retailers are owned by the State government. This often includes the majority of the State's water infrastructure, such as networks, water treatment plants and wastewater plants. State governments also have a role in regulating the industry, setting prices and providing subsidies.
- 18 New South Wales, Victoria, Queensland, Tasmania and the ACT provide little to no subsidies for water and wastewater services. Where subsidies are provided, they tend to be for capital purposes, or in New South Wales and Queensland, for supplying services to regional and Indigenous communities.
- 19 Western Australia, South Australia and the Northern Territory have uniform tariff policies that mainly subsidise water prices for residential customers outside capital cities. In Western Australia and South Australia, subsidies for residential connections in Perth and Adelaide appear to be minimal. Their subsidies are largely for regional and remote water services which tend to be more costly due to the small scale of operations, low customer density, or both.

20 Table 5 shows the value of water and wastewater subsidies for 2017-18. It shows that Western Australia, South Australia and the Northern Territory provide the highest subsidies per capita.

Table 5 State subsidies for water services, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Expenses (\$m)	48	6	58	197	103	0	0	46	458
Expenses (\$pc)	6	1	12	76	60	0	0	187	18

Source: State provided data for the 2019 Update and 2020 Review.

21 In this attachment, services and subsidies for water and wastewater are grouped together and referred to collectively as water services and water subsidies. Water services relate to residential water services only.

Indigenous community development

22 Most States provide support for Indigenous community development in discrete Indigenous communities, which includes co-ordinating capital works programs, managing State land rights legislation and land tenure, developing community plans, and educating community leaders about planning processes. Victoria, Tasmania and the ACT have very few, or no, discrete Indigenous communities.

Other community development

23 Community development expenses cover a wide variety of State activity but can broadly be described as community related administration and planning including regulating land use, administering zoning laws and providing facilities for community health, recreation and culture. As specified in the ABS Government Finance Statistics (GFS) classification, this component does not include expenses on the construction of housing, industrial buildings, public utilities or any other facilities.

24 States set overarching strategic plans for land use and zoning in their jurisdictions, and work with councils to implement these policies. Some State agencies have greater authority to assess development applications while other States situate these functions at the local government level. In the ACT, the National Capital Plan places restrictions on some planning and development decisions which result in some additional costs.²

Environmental protection

25 State governments have a role as a regulator and funding source for environmental protection. Each State has its own legislation and standards for most areas of

² These additional planning costs for the ACT are recognised in the national capital allowances assessment which is part of the Other expenses category.

environmental protection. States determine strategies for flood mitigation, protecting rivers, foreshores and beaches, and pollution control. States also manage protected land areas and national parks.

Commonwealth roles and responsibilities

- 26 In addition to general revenue assistance, the Commonwealth provides funding to the States for services to communities, comprising the Sustainable Rural Water Use and Infrastructure Programme and other national partnership payments (NPPs). Table 6 shows the main Commonwealth payments to the States for services to communities in 2017-18.

Table 6 Commonwealth payments to the States for Services to communities, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Sustainable Rural Water Use and Infrastructure Programme (\$m)	17	163	11	0	41	21	37	0	289
Other NPPs (\$m)	0	7	3	0	1	2	0	2	15
Total (\$m)	17	169	14	0	42	23	37	2	305
Total (\$pc)	2	27	3	0	24	43	90	9	12

Note: Table shows major payments only. Commonwealth own purpose expenses (COPEs) are not included. Payments that the Commission treats as 'no impact' are included in the table.

Source: Commonwealth *Final Budget Outcome, 2017-18*.

- 27 The Sustainable Rural Water Use and Infrastructure Programme payment funds several programs covering rural, environmental and urban water initiatives, including projects in the Murray-Darling Basin.
- 28 The complete list of Commonwealth payments and their treatment is available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).³

CATEGORY STRUCTURE

- 29 The assessment of the Services to communities category is undertaken in five components, two of which have sub-components:
- electricity subsidies
 - remote community electricity subsidies
 - other electricity subsidies.
 - water subsidies (which include wastewater subsidies)

³ Most Commonwealth payments to the States affect the grant distribution but some do not. The Commission refers to payments that affect the grant distribution as 'impact' payments. For more information, see Attachment 2 — Commonwealth payments.

- small community water subsidies
- other water subsidies.
- Indigenous community development
- other community development
- environmental protection.

30 Components allow different disability assessments to apply to sub-functions.

31 Table 7 shows the category's assessment structure, the size of each component and the disabilities that apply.

Table 7 Category structure, Services to communities, 2017-18

Component	Component expense	Disability	Influence measured by disability
	\$m		
Electricity — remote community subsidies	479	Remote communities	Recognises that costs are higher for remote communities.
		Regional costs	Recognises the higher costs for providing services in very remote communities.
Electricity — other electricity subsidies	528	EPC	The driver of these expenses is State population.
Water — small community subsidies	219	Small communities	Recognises that costs are higher for small communities.
		Regional costs	Recognises the higher costs for small communities in outer regional and remote areas.
Water — other water subsidies	239	EPC	The driver of these expenses is State population.
Indigenous community development	283	Population in discrete Indigenous communities	Recognises the higher costs of providing services in discrete Indigenous communities.
		Wage costs	Recognises the differences in wage costs between States.
		Regional costs	Recognises the higher costs of providing services to remote communities.
Other community development	1 900	EPC	The driver of these expenses is State population.
		Wage costs	Recognises the differences in wage costs between States.
		Regional costs	Recognises the higher costs of providing services to remote communities.
Environmental protection	3 346	Not applicable	These expenses are not differentially assessed.
		Wage costs	Recognises the differences in wage costs between States.
		Regional costs (a)	Recognises the higher costs of providing services to remote communities.

(a) Applied only to the protection of biodiversity and landscape sub-component (which includes national parks and wildlife).

Source: Commission calculation using State budget data.

Category and component expenses

32 The main data sources for calculating category and component expenses are ABS GFS data and State budget data.⁴ Component expenses are derived from State data for

⁴ Unless otherwise stated, category and component expenses for the first two assessment years are sourced from ABS GFS. States provide data for the most recent assessment year because GFS data are not available in time for the annual update.

the electricity subsidies, water subsidies and Indigenous community development components as reliable GFS classifications are not available for these components.

- 33 State data are also used to split expenses for both the electricity subsidies and water subsidies components into sub-components. The calculation of these splits is discussed below.

ASSESSMENT APPROACH

Electricity subsidies

- 34 Expenses for this component include subsidies to electricity service providers for services to households. Subsidies include both operating subsidies and capital subsidies, but exclude spending on:
- concession payments (for example, to pensioners and churches), which are assessed in the Welfare category
 - regulation expenses for the electricity sector, which are assessed in the Services to industry category.
- 35 There are separate assessments for remote community electricity subsidies and other electricity subsidies.

Remote community electricity subsidies

- 36 Remote community electricity subsidies include subsidies for off-grid communities in remote and very remote areas, as well as subsidies for remote parts of electricity networks where subsidies are due to higher costs. Network subsidies included in this sub-component are the remote and very remote parts of the North West Interconnected System (NWIS) in Western Australia and Ergon West in Queensland.
- 37 Differences in the cost of providing services to different regions within a State affect State expenses. For remote community electricity subsidies, the Commission has used State data to:
- identify the characteristics of remote communities receiving subsidies
 - calculate cost weights to reflect the difference in the level of per capita subsidies for remote and very remote communities.

- 38 The characteristics of communities which face very high costs, and therefore require subsidies, are communities with populations of over 50 people and a population density of at least 60 people per km², in remote and very remote areas.⁵ The population of these communities provides a policy neutral indicator of the people in each State requiring electricity subsidies.
- 39 The definition of remote communities will remain fixed for the current review period.

Regional costs

- 40 The assessment recognises that the costs of very remote communities are higher than remote communities.
- 41 State data show that:
- the per capita subsidy for very remote communities is much higher than the per capita subsidy for remote communities
 - very remote communities are smaller on average than remote communities.
- 42 Table 8 shows the cost weights to be applied to people in remote and very remote communities. They were derived from State subsidy data. The Commission used regression analysis by comparing the subsidies for each community against its population. The Commission does not intend to update these cost weights before the next review.

Table 8 Electricity — cost weights for remote and very remote communities

	Predicted subsidy \$ per capita	Weight
Remote	577	1.000
Very remote	1 989	3.447

Source: Commission calculation using State provided data.

Wage costs

- 43 The Commission does not intend to assess a wage costs factor for remote community electricity subsidies because there is no evidence that subsidies paid to electricity providers are influenced by wage levels.

Other electricity subsidies

- 44 Other electricity subsidies include subsidies for electricity networks where the subsidies are likely to be a policy choice, rather than due to an underlying disability.

⁵ Communities in urban centres/localities (UCLs) are not subject to a population density requirement, as ABS definitions are used for these communities. Most UCLs have a minimum population of 200 and population density of 100 persons per km². However some UCLs have lower population densities or population counts and may still be classified by the ABS as a UCL depending on the adjacent land use and other criteria.

These are areas such as the Darwin-Katherine network, Ergon East, and most of Ergon West. The Commission intends to assess the other electricity subsidies sub-component on an EPC basis.

Data and method

- 45 State data are used to estimate total expenses for both remote community electricity subsidies and other electricity subsidies.
- 46 Census data are used to determine the proportion of each State's population living in remote and very remote communities. Those proportions are applied to State populations to determine the number of people living in these communities in each assessment year. The cost weights from Table 8 are applied to these people.
- 47 The other electricity subsidies sub-component is assessed on an EPC basis.

Component calculations

- 48 Table 9 shows the calculation of total assessed expenses for the component in 2017-18.

Table 9 Illustrative assessment, electricity subsidies component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Remote community electricity subsidies sub-component									
Population in remote and very remote communities ('000)	22	2	76	60	27	8	0	50	245
Weighted population ('000) (a)	30	2	184	167	47	12	0	152	594
Assessed expenses (\$m)	20	1	137	147	42	8	0	124	479
Other electricity subsidies sub-component									
Total population ('000)	7 921	6 386	4 964	2 584	1 728	525	416	247	24 770
Assessed expenses (\$m)	169	136	106	55	37	11	9	5	528
Electricity subsidies component									
Assessed expenses (\$m)	189	138	243	202	78	19	9	130	1 007
Assessed expenses (\$pc)	24	22	49	78	45	37	21	525	41

(a) The very remote population is weighted using the electricity subsidies regional cost weight.

Source: Commission calculation.

Water subsidies

- 49 Expenses for this component include subsidies to water and wastewater service providers for services to residential households. Subsidies include both operating subsidies and capital subsidies, but exclude spending on:
- concession payments (for example, to pensioners, health care card holders and churches), which are assessed in the Welfare category

- regulation expenses for the water sector, which are assessed in the Services to industry category.

Small communities

- 50 There are economies of scale for large utilities, particularly for infrastructure and the operation and maintenance costs of water treatment works. On average, operating costs per connection are higher for small utilities.
- 51 The characteristics of communities which face very high costs, and therefore require subsidies, are communities with populations of over 50 but less than 1 000 people and a population density of at least 60 people per km², in inner regional, outer regional, remote and very remote areas.⁶ The population of these communities provides a policy neutral indicator of the people in each State requiring water subsidies.
- 52 The definition of small communities will remain fixed for the current review period.
- 53 The Commission has calculated the share of water subsidies that relate to small communities based on State data. This share will be updated annually to reflect changes in State policies.

Regional costs

- 54 Data from Western Australia and the Northern Territory show that water subsidies increase with increasing remoteness (Table 28), which supports the conceptual case that remoteness affects water provision costs due to higher fuel and maintenance costs. Additional information from Queensland showed that its remote and very remote areas were around twice as expensive by connection as its inner regional areas.⁷
- 55 The Commission derived cost weights from State water subsidies data.⁸ As complete data were not available by remoteness for all States, the Commission intends to:
- assess a joint cost weight for remote and very remote regions
 - discount the cost weights using the high discount (50%).
- 56 These cost weights are likely to capture some service delivery scale (SDS) costs, because the communities in outer regional, remote and very remote areas are smaller than those in inner regional areas. Table 10 shows the cost weights the Commission intends to apply to the population in small communities. Once finalised

⁶ Communities in UCLs are not subject to a population density requirement, as ABS definitions are used for these communities.

⁷ Queensland Government, former Department of Energy and Water Supply, *Queensland water and sewerage service provider performance comparative report, Financial year 2014–2015*, July 2016, p. 13.

⁸ The method for deriving this cost weight is discussed further on page 34.

using assessment year data, the Commission does not intend to update these cost weights before the next review.

Table 10 Small community water subsidies, regional cost weights

	Inner regional	Outer regional	Remote and very remote
Regional cost weights	1.000	1.263	2.621

Note: A discount of 50% has been applied to these weights.

Source: Commission calculation based on State data.

Wage costs

57 The Commission does not intend to assess a wage costs factor for water subsidies because there is no evidence that subsidies paid to water providers are influenced by wage levels.

Other water subsidies

58 Other water subsidies include subsidies for large communities and metropolitan areas where the subsidies are largely due to policy choice, rather than due to an underlying disability.⁹ The Commission intends to assess the other water subsidies sub-component on an EPC basis.

Data and method

59 State data are used to estimate total expenses for both small community water subsidies and other water subsidies. Where detailed State data are not available, the Commission has exercised judgment to estimate States' shares of small community subsidies.

60 Census data are used to determine the proportion of each State's population living in small communities. Those proportions are applied to State populations to determine the number of people living in these communities in each assessment year. The cost weights from Table 10 are applied to these people.

61 The other water subsidies sub-component is assessed on an EPC basis.

Component calculations

62 Table 11 shows the calculation of total assessed expenses for the component in 2017-18.

⁹ In these regions, water supply is more likely to be affordably cost recoverable for residential customers.

Table 11 Illustrative assessment, water subsidies component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Small community water subsidies sub-component									
Population in small communities ('000)	243	159	102	208	83	68	1	39	904
Weighted population ('000) (a)	282	176	181	310	126	91	1	100	1 267
Assessed expenses (\$m)	50	31	32	53	21	16	0	17	219
Other water subsidies sub-component									
Total population ('000)	7 921	6 386	4 964	2 584	1 728	525	416	247	24 770
Assessed expenses (\$m)	76	62	48	25	17	5	4	2	239
Water subsidies component									
Assessed expenses (\$m)	126	93	80	78	38	21	4	19	458
Assessed expenses (\$pc)	16	15	16	30	22	40	10	77	18

(a) The population is weighted by remoteness using the water subsidies regional cost weight.

Source: Commission calculation.

Indigenous community development

63 Expenses for this component include support for the governance and management of discrete Indigenous communities, in recognition of their greater needs due to their remoteness and smaller populations with low incomes.

Indigenous population living in discrete Indigenous communities

64 The assessment of these expenses is based on the number of Indigenous people living in discrete Indigenous communities. A discrete Indigenous community is defined as Statistical Areas Level 1s (SA1s)¹⁰ with populations that are more than 50% Indigenous, as measured by the latest Census data.

65 Victoria, South Australia and Tasmania supported using the number of Indigenous people living in discrete Indigenous communities as the driver of expenses. Other States did not comment.

Regional costs

66 The Commission considers that a significant portion of spending relates to remote service delivery rather than head office costs, and therefore a regional costs disability should be applied. It is not practicable to directly measure the effect of remoteness on the component, due to the diversity of services included in this component. Therefore, a general regional cost gradient using hospital and school data is applied to the Indigenous community development component. For further discussion and

¹⁰ For further information on SA1s see ABS, *Australian Statistical Geography Standard (ASGS): Volume 1 - Main Structure and Greater Capital City Statistical Areas*, July 2016, cat. no. 1270.0.55.001.

the calculation method for the general regional costs gradient, see Attachment 25 — Geography.

- 67 Victoria, Queensland and Tasmania supported applying a regional costs disability to this component. New South Wales had concerns about applying a regional costs disability as some expenses are head office costs. Other States did not comment.

Wage costs

- 68 Differences in wage costs between States have a differential effect on the cost of providing Indigenous community development services. There is a general method for measuring the influence of wage costs in components where the disability applies. For a description of the method see Attachment 24 — Wage costs.

Data and method

- 69 State data are used to determine expenses for Indigenous community development.
- 70 Census data are used to determine the proportion of each State's population living in discrete Indigenous communities. Those proportions are applied to State populations to determine the number of people living in these communities in each assessment year. Table 12 shows State expenses for this component are distributed using the number of people living in these communities, and then a regional costs and a wage costs factor are applied.

Component calculations

- 71 Table 12 shows the calculation of total assessed expenses for the component in 2017-18.

Table 12 Illustrative assessment, Indigenous community development component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Indigenous population in discrete Indigenous communities ('000)	9	0	32	19	3	0	0	50	113
Initial assessed expenses (\$m)	23	0	80	47	8	0	0	126	283
Regional costs factor	0.996	0.879	1.105	1.153	1.125	1.091	0.000	1.146	1.000
Wage costs factor	1.004	1.003	0.997	0.995	0.983	0.980	1.033	1.021	1.000
Unscaled expenses (\$m)	23	0	88	54	9	0	0	147	321
Assessed expenses (\$m)	20	0	78	47	8	0	0	130	283
Assessed expenses (\$pc)	3	0	16	18	5	0	0	527	11

Source: Commission calculation.

Other community development

- 72 Other community development expenses include regulating land use, administering zoning laws and planning and development of public facilities. This component also includes expenses related to community amenities such as the design, installation, operation and maintenance of street lighting, provision of facilities such as public toilets, drinking fountains, bus shelters, cemeteries and crematoria.
- 73 Expenses are initially assessed on an EPC basis and then wage costs and regional costs disabilities are applied.

Regional costs

- 74 As with the Indigenous community development component, the Commission recognises that differences in regional costs have differential effects on the cost of providing services in different areas.
- 75 A general regional costs gradient using hospital and school data is applied to the other community development component because it is not practicable to directly measure the effect of remoteness on expenses within the component. For further discussion and the calculation method for the general regional costs gradient, see Attachment 25 — Geography.
- 76 Victoria, Queensland, Western Australia and Tasmania supported applying a regional costs disability to this component. Other States did not comment.

Wage costs

- 77 Differences in wage costs between States have a differential effect on the cost of providing other community development services. There is a general method for measuring the influence of wage costs in components where the disability applies. For a description of the method see Attachment 24 — Wage costs.

Data and method

- 78 GFS data are used to determine expenses for other community development, and are updated on an annual basis. Expenses are initially assessed on an EPC basis, and then regional costs and wage costs disabilities are applied.

Component calculations

- 79 Table 13 shows the calculation of total assessed expenses for the component in 2017-18.

Table 13 Illustrative assessment, other community development component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
EPC expenses (\$m)	608	490	381	198	133	40	32	19	1 900
Regional costs factor	0.993	0.991	1.005	1.012	1.006	1.014	0.988	1.155	1.000
Wage costs factor	1.004	1.003	0.997	0.995	0.983	0.980	1.033	1.021	1.000
Assessed expenses (\$m)	606	487	382	200	131	40	33	22	1 900
Assessed expenses (\$pc)	77	76	77	77	76	76	78	90	77

Source: Commission calculation.

Environmental protection

80 Expenses for this component include services such as:

- developing and monitoring pollution and air quality standards
- pollution abatement and control
- control and prevention of erosion of beaches and foreshores
- flood mitigation in urban areas
- research into pollution abatement and control
- national parks and wildlife services.

81 The Commission intends to assess environmental protection expenses on an EPC basis,¹¹ as they cover a wide variety of services and it is neither practical to disaggregate these expenses nor possible to identify a single broad indicator for assessing total spending.

82 The Commission also intends to assess national parks and wildlife expenses on an EPC basis.¹² This is due to the uncertainties surrounding the policy influences on the number and size of national parks and the difficulty in obtaining reliable data to measure relative cost influences. These expenses are now included in the environmental protection component due to changes in GFS classifications. During the 2015 Review they were initially assessed on an EPC basis in the Other expenses category, and then regional costs and wage costs disabilities were applied.

Regional costs

83 Differences in the cost of providing services to different regions within a State affect State expenses. National parks and wildlife expenses are now included as part of the

¹¹ The Commission intends to initially assess expenses on an EPC basis, and then apply a regional costs disability to protection of biodiversity and landscape expenses (32.8% of the component), and a wage costs disability to the whole component.

¹² The Commission intends to initially assess expenses on an EPC basis, and then apply regional costs and wage costs disabilities.

Classification of Functions of Government – Australia (COFOG-A) 0541, Protection of biodiversity and landscape in GFS. This COFOG-A also includes a range of other services including protection of native plants, animals and habitats, prevention of erosion of beaches and foreshores, services for locations on the Commonwealth Heritage List and the National Heritage List, and flood mitigation in urban areas.

- 84 The expenses included under protection of biodiversity and landscape are likely to be affected by regional costs differences. The Commission intends to apply the regional costs disability to these expenses. The remainder of the environmental protection component covers a range of services, including pollution abatement, which is influenced mostly by the number of urban centres, regulatory costs, research and other expenses which may be incurred in central offices. The Commission does not intend to apply regional costs disabilities to the remainder of the component.
- 85 Victoria, Queensland, South Australia and the ACT supported the proposal. Tasmania did not object to the proposal but wished to see further details of the assessment. The Northern Territory supported applying a regional costs disability to all of environmental protection expenses, and at least to national parks and wildlife expenses at a minimum. The ACT noted it would be difficult to calculate cost weights using actual expenses. New South Wales and Western Australia did not comment.
- 86 A general regional costs gradient using hospital and school data is applied to the protection of biodiversity and landscape sub-component of environmental protection because it is not practicable to directly measure the effect of remoteness on service expenses within the component, given the scope and diversity of this component. For further discussion and the calculation method for this remoteness disability, see Attachment 25 — Geography.

Wage costs

- 87 Differences in wage costs between States have a differential effect on the cost of providing environmental protection services. There is a general method for measuring the influence of wage costs in components where the disability applies. For a description of the method see Attachment 24 — Wage costs.

Data and method

- 88 The environmental protection component is calculated as the category residual. This is to adjust for discrepancies between the reported State expenses for electricity subsidies, water subsidies, and Indigenous community development; and GFS category expenses.
- 89 Environmental protection expenses are initially distributed on an EPC basis. A regional costs disability is applied only to protection of biodiversity and landscape expenses, which includes national parks and wildlife expenses. Protection of

biodiversity and landscape expenses are identified using GFS data and constitute 32.8% of component expenses. A wage costs disability is applied to the total component.

Component calculations

90 Table 14 shows the calculation of total assessed expenses for the component in 2017-18.

Table 14 Illustrative assessment, environmental protection component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
EPC expenses (\$m)	1 070	863	671	349	233	71	56	33	3 346
Regional costs factor (a)	0.998	0.997	1.002	1.004	1.002	1.005	0.996	1.052	1.000
Wage costs factor	1.001	1.001	0.999	0.998	0.994	0.993	1.011	1.007	1.000
Assessed expenses (\$m)	1 069	861	671	350	233	71	57	35	3 346
Assessed expenses (\$pc)	135	135	135	135	135	135	136	143	135

Note: The quantum of this component is currently based on 2019 Update expenses, but will be updated when current GFS data are available.

(a) Applied only to protection of biodiversity and landscape expenses (32.8% of component expenses).

Source: Commission calculation.

CATEGORY CALCULATIONS

91 Table 15 brings the assessed expenses for each component together to derive the total assessed expenses for each State for the category. It shows at the component level how each disability assessment moves expenses away from an EPC distribution to obtain assessed expenses.

92 Each element shown in Table 15 shows the effect of that variable in isolation. There are interactions between each of these disabilities, and so the sum of the disabilities may be different from the assessed expenses for a component. These interactions are generally small.

Table 15 Illustrative category assessment, Services to communities, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Electricity subsidies									
EPC	41	41	41	41	41	41	41	41	41
Remote communities	-17	-19	8	37	5	-4	-19	484	0
Other electricity subsidies	0	0	0	0	0	0	0	0	0
Assessed expenses	24	22	49	78	45	37	21	525	41
Water subsidies									
EPC	18	18	18	18	18	18	18	18	18
Small communities	-3	-4	-2	12	4	21	-9	58	0
Other water subsidies	0	0	0	0	0	0	0	0	0
Assessed expenses	16	15	16	30	22	40	10	77	18
Indigenous community development									
EPC	11	11	11	11	11	11	11	11	11
Indigenous communities	-9	-11	5	7	-7	-11	-11	499	0
Regional costs	0	-1	1	2	1	1	-11	2	0
Wage costs	0	0	0	0	0	0	0	0	0
Assessed expenses	3	0	16	18	5	0	0	527	11
Other community development									
EPC	77	77	77	77	77	77	77	77	77
Regional costs	-1	-1	0	1	0	1	-1	12	0
Wage costs	0	0	0	0	-1	-2	3	2	0
Assessed expenses	77	76	77	77	76	76	78	90	77
Environmental protection									
EPC	135	135	135	135	135	135	135	135	135
Regional costs	0	0	0	1	0	1	-1	7	0
Wage costs	0	0	0	0	-1	-1	2	1	0
Assessed expenses	135	135	135	135	135	135	136	143	135
Total assessed expenses	254	247	293	339	282	288	246	1 363	282

Note: Table may not add up due to interactions between disabilities and rounding. This is particularly evident for Indigenous community development expenses for the ACT and the Northern Territory. The EPC and assessed expenses are total spending per capita. The amounts for each disability are redistributions from an EPC assessment.

Source: Commission calculation.

INFRASTRUCTURE ASSESSMENT

93 States require infrastructure to support service delivery. State infrastructure requirements are assessed in the Investment category. The main driver of investment in Services to communities related infrastructure is population growth. Other disabilities affecting services to communities do not affect State infrastructure

requirements. This is because the infrastructure related to services to communities is typically owned by local governments or public non-financial corporations, not States. In the absence of clear evidence on State disabilities related to the need for assets, no differential assessment has been made.

- 94 Interstate differences in construction costs are also recognised in the Investment category.
- 95 For a description of the Investment assessment, see Attachment 21 — Investment.

ASSESSMENT ISSUES

- 96 The 2015 Review assessments provided the starting point for the 2020 Review. In April 2018, Commission staff released a draft assessment paper (DAP) setting out staff proposals for the Services to communities category. States provided submissions on the proposals. The staff proposals and State submissions are available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).
- 97 The main assessment issues for the category were:
- whether there should be separate assessments for electricity and water subsidies
 - developing a new approach for assessing electricity subsidies
 - defining the characteristics of remote communities receiving subsidies
 - estimating the split between remote community subsidies and other subsidies
 - determining the assessment for other electricity subsidies
 - developing a new approach for assessing water subsidies
 - defining the characteristics of small communities receiving subsidies
 - estimating the split between small community subsidies and other subsidies
 - determining the assessment for other water subsidies
 - defining and measuring Indigenous community development expenses.
- 98 The following sections discuss the main issues for services to communities, including State views.¹³

¹³ State submissions often include significant detail and supporting evidence. In this attachment, the Commission respond to the arguments and evidence States presented in their submissions. For the full detail of State submissions, see the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

Assessing electricity subsidies separately from water subsidies

- 99 In the 2015 Review, electricity, water and wastewater subsidies were jointly assessed because the underlying drivers were considered the same, and there were no reliable data available to form a view on the specific cost drivers for each (for example, fuel input costs, water availability and quality). The Commission proposed to separate these subsidies because reliable data were now available to consider separately the cost drivers for electricity and water subsidies.
- 100 New South Wales, Victoria, South Australia, the ACT and the Northern Territory supported assessing electricity subsidies separately. Queensland and Western Australia did not comment. Tasmania said the data, particularly for water subsidies, might not be sufficiently reliable to justify splitting electricity and water subsidies.
- 101 The distribution of electricity and water subsidies varies between States, reflecting differences in State policies and circumstances. Remoteness is the main driver of electricity costs, while diseconomies of small scale is the main driver for water costs. Since the 2015 Review, States have improved the level of data available, allowing electricity and water to be separately assessed. Due to the different drivers of subsidies for electricity and water, the Commission intends to assess them separately.

Electricity subsidies

Estimating the split between remote community electricity subsidies and other electricity subsidies

- 102 In the 2015 Review, the utilities subsidies assessment was divided into common and differential subsidies using limited State data and the Commission's judgment, on a 50:50 basis. The split was fixed for the duration of the review. However, State data are now available to update this split on an annual basis.
- 103 For the 2020 Review, the Commission requested electricity subsidy data by community or service area from States. Comprehensive data were received from the five States that provide electricity subsidies, that is, Queensland, Western Australia, South Australia, Tasmania and the Northern Territory.¹⁴
- 104 In total, States provided 178 records. This was composed of six electricity networks that covered large areas including capital cities, and electricity systems for 172 isolated communities. Table 16 summarises the records provided by States.

¹⁴ Data received included expenses, revenue and subsidies, the amount of electricity supplied, number of connections, fuel type, Indigenous status of the community and geospatial information about the service area. Financial data related to 2014-15 and 2015-16.

Table 16 Electricity network and off-grid community records provided by States

	Qld	WA	SA	Tas	NT	Total
	no.	no.	no.	no.	no.	no.
Networks	3	2	0	0	1	6
Off-grid communities	35	35	18	2	82	172

Note: The Energex (in Queensland) and South West Interconnected System (SWIS - in Western Australia) networks are not included in the following analysis as these networks are no longer subsidised as of 2015 and 2018-19 respectively.

Source: State data provided for the 2020 Review.

105 The four¹⁵ subsidised electricity networks extend across several remoteness areas but most of the people serviced by them are from inner regional or outer regional areas. The only subsidised networks with significant remote or very remote populations are the NWIS in Western Australia and half of Ergon West in Queensland (Table 17).

Table 17 Population shares in subsidised electricity networks by State and ABS remoteness areas, 2016-17

	Qld		WA		NT	Total
	Ergon East	Ergon West	NWIS	Darwin-Katherine		
	%	%	%	%	%	%
Major cities	0.0	0.0	0.0	0.0	0.0	0.0
Inner regional	51.1	0.0	0.0	0.0	0.0	41.0
Outer regional	47.3	51.3	0.0	90.2	90.2	50.5
Remote	1.6	22.3	79.5	9.6	9.6	6.0
Very remote	0.0	26.3	20.5	0.2	0.2	2.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

Note: The Energex and SWIS networks are not included.

Source: ABS, 2016-17, *Estimated Resident Population (ERP)*, mapped to networks using State network area maps.

106 The average network subsidy per capita is higher in remote and very remote areas, which reflects a combination of higher transmission and distribution costs, and diseconomies of small scale. Particularly, this appears to be the case for Ergon West's remote and very remote customers in Queensland and NWIS customers in Western Australia (Table 18).

¹⁵ The Commission did not include the Energex and South West Interconnected System (SWIS) networks as these networks are no longer subsidised as of 1 January 2015 and 30 June 2019 respectively. The analysis reflects the circumstances that are expected to prevail during the application years for the 2020 Review.

Table 18 Estimated electricity network subsidies per capita, average of 2014-15 to 2015-16

Network	Qld — Ergon East	Qld — Ergon West	Qld — Energex	WA — SWIS	WA — NWIS
Subsidies (\$pc)	205	1 911	—	—	1 495

Note: The Darwin-Katherine network is not shown due to confidentiality requirements. The Energex and SWIS networks will have discontinued providing subsidies during the application years for the 2020 Review.

Source: State data for the 2020 Review and 2016 Census data.

107 Among the 172 off-grid communities, 154 are located in very remote areas and 17 are in remote areas; only one is located in outer regional Australia (Table 19).

Table 19 Number of subsidised off-grid communities by ABS remoteness areas, 2015-16

	Qld	WA	SA	Tas	NT	Total
	no.	no.	no.	no.	no.	no.
Major cities	0	0	0	0	0	0
Inner regional	0	0	0	0	0	0
Outer regional	0	0	0	0	1	1
Remote	2	3	5	0	7	17
Very remote	33	32	13	2	74	154
Total	35	35	18	2	82	172

Source: State data for the 2020 Review.

108 Based on the above information, the value of subsidies provided by States for networks and off-grid communities was used to calculate the split for remote community electricity subsidies and other electricity subsidies, as shown in Table 20.

- Remote community electricity subsidies include subsidies for communities without network access in remote and very remote areas, which are generally off-grid communities, as well as for networks (or parts of networks) where high subsidies are due to higher costs (that is, remote and very remote parts of the NWIS and Ergon West). The Commission’s definition of a remote community for the purposes of the electricity subsidies assessment is discussed later in this section.
- Other electricity subsidies include subsidies for electricity networks where the subsidies are likely to be a policy choice, rather than due to an underlying disability, that is, the Darwin-Katherine network, Ergon East, and half of Ergon West.

Table 20 Split between remote community electricity subsidies and other electricity subsidies, 2014-15 to 2017-18

	Remote community subsidies		Other subsidies		Total
	\$m	%	\$m	%	\$m
2014-15	377	29	910	71	1 287
2015-16	442	37	745	63	1 187
2016-17	457	37	773	63	1 231
2017-18	479	48	528	52	1 007

Note: The remote community subsidy includes off-grid communities plus the remote/very remote expenses for the NWIS and Ergon West. The Energex and SWIS networks are included as part of other subsidies where applicable, but subsidies for these networks were discontinued from 2015 and 2018-19 respectively. Remote community subsidies for 2016-17 and 2017-18 are based on 2015-16 expenses, indexed. These values will be updated with actual expenses prior to the final report. Current data are available for total subsidies expenses.

Source: State data for the 2020 Review.

109 From 2018-19 onwards, subsidies for the SWIS network were discontinued. As a consequence, the subsidy split is expected to be around 55% for remote community electricity subsidies and 45% for other electricity subsidies from 2018-19. The Commission intends to update the split annually based on data provided by States, rather than leaving it fixed for the duration of the review. This will allow the assessment to reflect changes to what States do.

Characteristics of off-grid communities receiving electricity subsidies

110 In the 2015 Review, the criteria for communities that received large electricity subsidies were determined mostly based on piecemeal information provided by States.

111 Using State provided data for the 2020 Review, the Commission has been able to identify that off-grid communities that are not connected to a major electricity network are the most costly types of communities. The subsidies for larger off-grid communities with populations over 1 000 people (Table 21) are similar to those for electricity networks servicing remote and very remote populations (Table 18).

Table 21 Electricity — off-grid communities by size, average of 2014-15 to 2015-16

Community size	Communities	Total population	Average subsidy
	no.	'000	\$pc
0 - 50	4	0	7 206
51 - 500	101	25	2 550
501 - 1 000	28	20	2 806
1 001 - 5 000	25	52	1 849
> 5 000	4	73	1 340
Total	162	171	1 847

Note: Excludes outliers, defined as the top five and bottom five communities when ranked by average subsidy per capita.

Source: State data for the 2020 Review.

112 Most subsidised off-grid communities are serviced by isolated electricity generators. These communities are usually geographically distant from major electricity grids. Table 22 summarises the characteristics by remoteness of the off-grid communities.

Table 22 Electricity — off-grid communities by remoteness, average of 2014-15 to 2015-16

	Communities	Population	Average size	Subsidy	Average subsidy
	no.	persons	persons	\$m	\$pc
Remote	14	82 453	4 873	110	1 337
Very remote	148	88 094	604	205	2 324
Total	162	170 547	1 028	315	1 847

Note: Ten communities including one outer regional community were excluded as outliers.

Source: Based on data provided by Queensland, Western Australia, South Australia, Tasmania and the Northern Territory for the 2020 Review.

113 After analysing the characteristics of these communities, the following criteria were chosen:

- communities in remote and very remote areas
- populations of over 50, with no upper bound
- population density of at least 60 people per km² (for geographic areas not identified as Urban Centres and Localities (UCLs)).¹⁶

114 Different criteria were tested but the final criteria were chosen because they capture a significant proportion (75.6%) of the 172 off-grid communities. The Commission intends to use this as a policy neutral indicator of the people in each State requiring electricity subsidies.

¹⁶ Most UCLs have a minimum population of 200 and population density of 100 persons per km². However, some UCLs have lower population densities or population counts and may still be classified by the ABS as a UCL depending on the adjacent land use and other criteria.

- 115 The Commission decided to include large communities serviced by remote electricity networks because the State data showed that these communities received similar subsidies to the large off-grid communities. In total, there are eight large communities that meet the criteria and only one of them is not subsidised (Port Lincoln in South Australia).¹⁷
- 116 Western Australia, South Australia and the Northern Territory supported an assessment that included the influence of remoteness. Western Australia supported assessing all remote and very remote areas, including large towns. New South Wales supported the conceptual case that costs are affected by isolation, but noted that the previous use of the 50 — 1 000 population size group was somewhat arbitrary. Victoria, Queensland and Tasmania wished to see the assessment before commenting. The ACT had some concerns regarding the degree of State policy choice influencing subsidies, and also wished to see the details of the assessment.
- 117 In its submission to the DAP, the Northern Territory discussed using various population groups including a group of 0 to 500 people plus a group of 500 to 2 500 people. However, the Commission found that any further splitting of population size was not statistically significant when remoteness was included in the model, meaning that the inclusion of the remoteness variable was essentially measuring the effect of community size. As seen in Table 22, the average population of very remote off-grid communities is 604 people compared to 4 873 for remote communities.
- 118 Compared to the 2015 Review method, the criteria have been relaxed (Table 23) as the State provided data showed that even large or relatively dispersed communities receive subsidies.

Table 23 Electricity — criteria for remote communities, by review method

	R2015			Proposed for R2020		
	Population lower bound	Population upper bound	Population density	Population lower bound	Population upper bound	Population density
			As per ABS definitions			As per ABS definitions
UCL (a)	50	1 000		50	max (30 000)	
Non-UCL	50	1 000	≥100/km ²	50	max (30 000)	≥60/km ²
Remoteness	Remote and very remote areas			Remote and very remote areas		

(a) Most UCLs have a minimum population of 200 and population density of 100/km². However some UCLs have lower population densities or population counts and may still be classified by the ABS as a UCL depending on the adjacent land use and other criteria.

Source: For further information on UCLs see ABS, *Australian Statistical Geography Standard (ASGS): Volume 4 - Significant Urban Areas, Urban Centres and Localities, Section of State*, July 2016, cat. no. 1270.0.55.004.

¹⁷ The other large communities (population over 5 000) are Alice Springs, Broome, Esperance, Karratha, Katherine, Mount Isa and Port Hedland. With the exception of Katherine, these communities are either off-grid or serviced by remote electricity networks with a small customer base.

Assessing other electricity subsidies on an EPC basis

- 119 In the DAP, Commission staff proposed to not differentially assess electricity subsidies when the decision not to fully cost recover is due to State policy choice rather than unavoidable high costs.
- 120 New South Wales, Victoria, South Australia and the ACT agreed with the proposal. Western Australia and the Northern Territory disagreed that subsidies for their remote and very remote areas were the result of policy choices. Queensland and Tasmania wished to see the assessment before commenting.
- 121 All communities in remote and very remote areas, including large communities, are now assessed as being remote communities that require subsidies. This addresses concerns raised by Western Australia and the Northern Territory. Additional concerns raised by Western Australia in relation to its SWIS network are addressed on page 40.
- 122 The Commission intends to continue assessing the other electricity subsidies on an EPC basis, using the total population because there is no evidence that these subsidies are due to an underlying disability. An assessment based on populations in major cities, inner regional and outer regional areas is not materially different to using the total population.

Water subsidies

Defining the communities that receive water subsidies

- 123 There are economies of scale for large utilities, particularly for infrastructure and the operation and maintenance costs of water treatment works. On average, operating costs per connection are higher for small utilities. In the DAP, Commission staff proposed to differentially assess water subsidies, which are the result of unavoidably high costs.
- 124 All States supported an assessment of subsidies due to unavoidably high costs. Western Australia said that water quality, accessibility and availability were cost factors influencing its subsidy levels.
- 125 South Australia supported assessing water quality and availability issues. Tasmania supported an assessment based on small communities in remote and very remote regions but did not support an assessment of water availability and quality. It noted accessibility was an issue due to mountainous terrain. The ACT was concerned that the use of community size and remoteness as factors might not capture other factors including socio-economic status (SES), the value of assets or future investment requirements.
- 126 Issues relating to water quality, availability, and SDS are addressed in the Other issues considered by the Commission section on page 41.

127 Data provided by Western Australia and the Northern Territory support the conceptual case that small communities face significantly higher costs and therefore require subsidies (Table 24). New South Wales did not provide data but it provides subsidies to small regional communities through the Water Security for Regions Program, the Safe and Secure Water Program, and the Aboriginal Communities Water and Sewerage Program. These programs provide financial assistance, mainly capital grants, to regional communities because cost recovery is not feasible, due to their small size.

128 For communities with less than 1 000 people, the levels of subsidies are significantly higher compared to bigger communities (Figure 1). This is consistent with evidence from Queensland, Western Australia, South Australia, Tasmania and the Northern Territory provided during the 2010 Review.¹⁸

Table 24 Water expenses and subsidies per capita by community size, WA and NT, average of 2014-15 and 2015-16

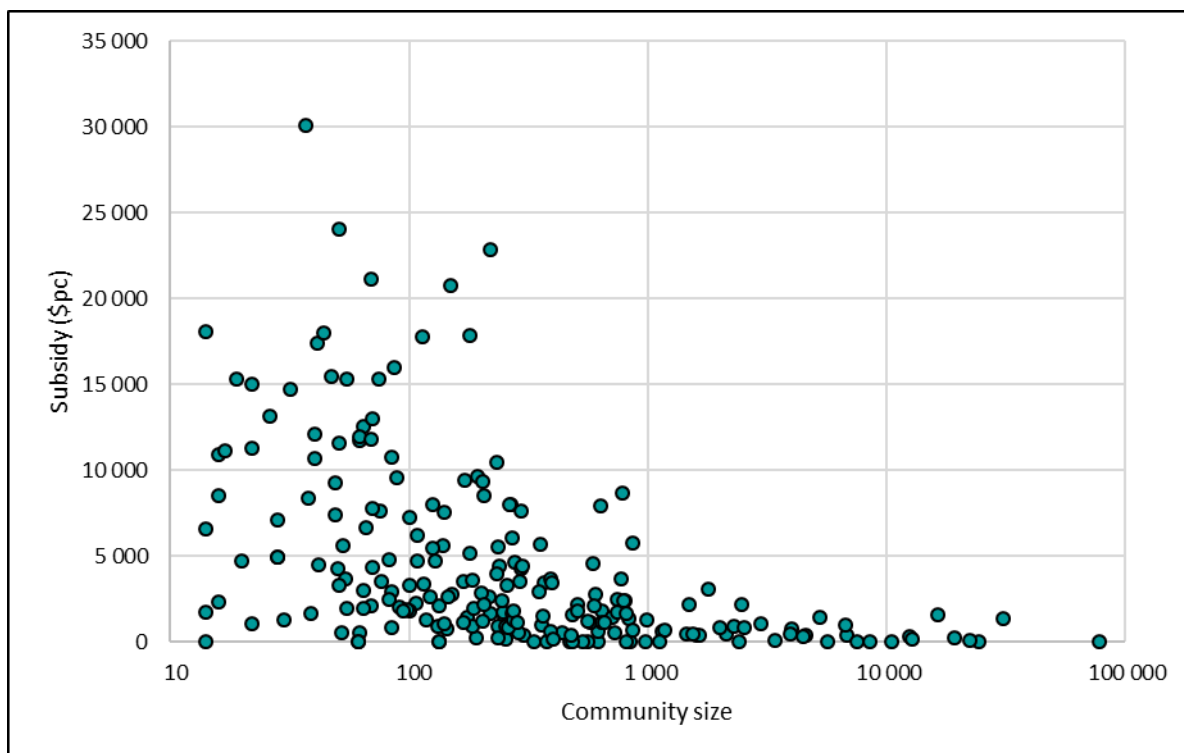
Population group	WA		NT		Total	
	Expense	Subsidy	Expense	Subsidy	Expense	Subsidy
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
51 to 200	6 740	5 658	2 834	1 451	5 825	4 673
201 to 1 000	4 395	2 404	1 654	966	3 492	1 930
1 001 to 10 000	2 203	692	1 109	723	2 043	696
10 000+	282	83			282	83
Total	616	247	1 501	895	643	267

Note: The Northern Territory only included data for remote Aboriginal communities (data excludes larger communities including Darwin, Katherine and Alice Springs). Only communities that could be matched with a population group were included.

Source: State data for the 2020 Review.

¹⁸ 2010 Review *Report on GST Revenue Sharing Relativities*, Volume 2, pp. 299-292.

Figure 1 Water — subsidised communities, by community size and subsidy per capita, average of 2014-15 to 2015-16



Note: Includes data from the Northern Territory and Western Australia. Only communities that could be matched with a population group were included.
Community size is shown on a log scale.
Excludes outliers, defined as the top 20 communities when ranked by their average subsidy per capita.

Source: State data for the 2020 Review.

129 The Commission intends to make an assessment for communities with the following characteristics:

- more than 50 but less than 1 000 people
- population density of at least 60 persons per km² (for non-UCLs)
- in inner regional, outer regional, remote and very remote areas.

130 These communities are further referred to as ‘small communities’.

131 This cut-off captures 59.7% of the subsidised communities in Western Australia and the Northern Territory. While some communities with more than 1 000 people receive subsidies, the proposed cut-off is a reasonable policy neutral indicator of small communities requiring subsidies due to higher costs. Different maximum population sizes were tested, but increasing the population size to say 5 000 only increased the number of subsidised communities captured by 16.3%, and applying such a large maximum would capture many other communities that are likely not subsidised.

- 132 Of the 320 subsidised communities in Western Australia and the Northern Territory where the population was known, 53 communities (16.6%) were too small to meet the criteria, 42 (13.1%) were too large, and 34 (10.6%) did not meet the density criteria. The Commission intends to use the same minimum size and density requirements for the water assessment as per the electricity assessment, as the types of communities that receive electricity services are also likely to receive water services.
- 133 Table 25 compares the criteria for small communities to that used during the 2015 Review.

Table 25 Water subsidies — criteria for small communities, by review method

	R2015			Proposed for R2020		
	Population lower bound	Population upper bound	Population density	Population lower bound	Population upper bound	Population density
			As per ABS definitions			As per ABS definitions
UCL (a)	50	1 000		50	1 000	
Non-UCL	50	1 000	≥100/km ²	50	1 000	≥60/km ²
Remoteness	Remote and very remote areas			Inner regional, outer regional, remote and very remote areas		

(a) Most UCLs have a minimum population of 200 and population density of 100/km². However, some UCLs have lower population densities or population counts and may still be classified by the ABS as a UCL depending on the adjacent land use and other criteria.

Source: For further information on UCLs see ABS, *Australian Statistical Geography Standard (ASGS): Volume 4 - Significant Urban Areas, Urban Centres and Localities, Section of State*, July 2016, cat. no. 1270.0.55.004.

- 134 The Commission observes that States provide subsidies to small communities in all remoteness areas including inner and outer regional areas. This mainly reflects the higher per capita infrastructure costs associated with providing water services on a small scale. Table 26 shows the State shares of these populations.

Table 26 Population in small communities by State, 2016-17

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Inner regional	104	72	60	22	22	11	0	0	292
Outer regional	57	34	50	21	19	27	0	1	211
Remote	3	1	14	12	10	4	0	4	48
Very remote	3	0	19	17	4	2	0	20	66
Total	167	108	143	72	56	44	0	26	617
Total share (%)	27.1	17.5	23.2	11.7	9.0	7.2	0.1	4.2	100.0
Population share (%)	32.0	25.6	20.0	10.5	7.0	2.1	1.7	1.0	100.0

Note: This table refers to small communities as defined in Table 25, save for the final row, which shows States' total population share for comparison.

Source: ABS 2016 Census data.

Estimating the split between small community water subsidies and other water subsidies

135 Using a community size cut-off of 1 000, the water subsidies expense data can be divided into small community water subsidies and other water subsidies.

- Small community subsidies include subsidies for small communities in Western Australia, South Australia¹⁹ and the Northern Territory. New South Wales' spending on the Water and Sewer System for Aboriginal Communities programs, Water Security for Regions Program, Safe and Secure Water Program, and the Country Towns Water Supply and Sewerage Scheme are assumed to relate to small communities and are included in this component.²⁰
- The other water subsidies sub-component is calculated as a residual.

136 Table 27 shows the value of the small community and other water subsidies. The quantum of other subsidies has been decreasing in recent years, mostly due to reductions in Western Australia's subsidies. The small community subsidies are relatively stable.

Table 27 Split between small community water subsidies and other water subsidies, 2014-15 to 2017-18

	Small community subsidies		Other subsidies		Total
	\$m	%	\$m	%	\$m
2014-15	208	33	432	67	640
2015-16	188	33	391	67	579
2016-17	189	41	268	59	457
2017-18	219	48	239	52	458

Source: State data from the 2018 Update and the 2020 Review.

137 The Commission has used some judgment to determine the split between small community and other water subsidies. This mainly reflects a lack of community level data from New South Wales, Queensland and South Australia.

138 Values for 2016-17 and 2017-18 are based on 2015-16 values, indexed. Updated data for later years will be requested from States and included in the final report. In the event that 2018-19 data are unavailable in time for the final report, 2017-18 values will be indexed and used as a proxy.²¹

¹⁹ South Australia was assumed to spend the national average amount for small communities (around \$460 per capita based on 2015-16 data), and this was applied to their population in small communities. Remaining subsidies for South Australia are assumed to relate to larger communities.

²⁰ This spending by New South Wales amounted to 21% of the total small community subsidy in 2017-18.

²¹ Western Australia has stated that their final year data will be unavailable in time for each review/update cycle.

Determining a regional cost weight for small community water subsidies

- 139 There are additional costs for small communities in remote areas due to the higher costs of fuel and other inputs. The Commission intends to recognise this by applying cost weights to outer regional, remote and very remote communities.
- 140 Data from Western Australia and the Northern Territory show the per capita level of subsidies are higher for outer regional, remote and very remote areas compared to inner regional areas, (Table 28), which supports the conceptual case that remoteness affects water provision costs, due to higher fuel and maintenance costs. It is appropriate to recognise that costs vary due to remoteness.

Table 28 Water subsidies by ABS remoteness areas, WA and the NT, 2015-16

ABS remoteness area	Operating subsidies	Capital subsidies	Total subsidies
	\$m	\$m	\$ pc
Major cities	3	0	4
Inner regional	43	0	342
Outer regional	111	0	1 379
Remote	77	8	1 587
Very remote	59	8	1 344

Source: Data from Western Australia and the Northern Territory for the 2020 Review.

- 141 As the Commission does not have complete data for all States that provide water subsidies, in order to derive regional cost weights, the following conservative assumptions have been made:
- the value of New South Wales’ subsidies for small communities has been allocated evenly among its population living in small communities, regardless of remoteness status
 - Queensland is assumed not to provide any subsidies to small communities²²
 - South Australia was allocated the average per capita spending of New South Wales, Western Australia and the Northern Territory, distributed evenly across its population living in small communities, regardless of remoteness status.
- 142 Table 29 shows the regional cost weights calculated from State data. The regional cost weight has been discounted by 50% to recognise that it is based on incomplete data.

²² Historically, the value of Queensland’s water subsidies has been small. In 2017-18, it was \$60 million or \$12 per capita, below the national average (Table 5).

Table 29 Water — regional cost weights for small communities

	Average subsidy (\$pc)	Weight	Discounted weight
Inner regional	214	1.000	1.000
Outer regional	326	1.526	1.263
Remote/very remote	907	4.241	2.621

Note: The discounted weight is the weight that will be used in the assessment. The average subsidy is calculated using the average of States' 2014-15 to 2015-16 expenses. This weight will be updated using assessment year data prior to the final report, and then will remain fixed for the review period.

Source: Data from States for the 2020 Review and 2019 Update.

Assessing other water subsidies on an EPC basis

- 143 In the DAP, Commission staff proposed to assess water subsidies for larger urban communities on an EPC basis because the decision not to fully cost recover for these communities is a policy choice.
- 144 New South Wales and Victoria supported the proposal not to differentially assess water subsidies, when the decision to not fully cost recover is due to State policy. Queensland, Tasmania and the ACT did not comment directly on the proposal. Western Australia, South Australia and the Northern Territory did not agree with the implication that part of their subsidies were due to policy choice, and cited various factors that contributed to their subsidy costs including water quality and availability, remoteness, isolation and distance from the water source.
- 145 In 2008, all jurisdictions agreed to full cost recovery in line with the National Water Initiative Pricing Principles (NWIPP).²³ A recent review by Infrastructure Australia found that regional Queensland, Western Australia and the Northern Territory had yet to meet minimum standards for pricing under the NWIPP. The report noted that a lack of transparency on reform processes for water utilities meant there was insufficient information to assess whether full cost recovery was being achieved in these areas.²⁴
- 146 As shown in Table 27, the value of subsidies for larger urban centres has been decreasing. The Commission intends to assess other water subsidies EPC on the basis that these subsidies represent policy choices.

²³ Department of Agriculture and Water Resources, [National Water Initiative Pricing Principles](http://www.agriculture.gov.au/water/policy/nwi/pricing-principles) (<http://www.agriculture.gov.au/water/policy/nwi/pricing-principles>), [accessed Oct 2018]. These principles were agreed by the Council of Australian Governments in 2004.

²⁴ Infrastructure Australia, *Reforming Urban Water: A national pathway for change*, 2017, section 4.7.

Indigenous community development

Assessing expenses separately from other community development

- 147 Expenses for this component were previously combined with other community development in the 2015 Review. In the DAP, Commission staff proposed to separate this component from other community development to increase transparency. Victoria, Queensland, South Australia, Tasmania, the ACT and the Northern Territory supported the proposal. Western Australia did not comment. New South Wales did not support separating this component due to concerns about data quality and the additional complexity resulting from disaggregating spending from other community development.
- 148 During the 2015 Review, Indigenous community development spending was disaggregated from other community development spending in order to apply the disability of the Indigenous population living in discrete Indigenous communities. However, Indigenous community development spending was not separately shown in tables or analyses. Separating the Indigenous community development expenses does not increase complexity in the assessment and makes the assessment more transparent.

General revenue assistance for Indigenous councils

- 149 Queensland and the Northern Territory provide general revenue assistance to local councils with a high proportion of Indigenous people. These grants, totalling \$34 million for Queensland²⁵ and \$56 million for the Northern Territory,²⁶ are intended to assist local councils to meet a wide range of costs including general public services, public order and safety, health, recreation and culture, transport and communication, other economic affairs, education, essential services and public amenities. The grants cannot be disaggregated by purpose.
- 150 Most grants for local councils are assessed according to the purpose for which they are provided. For example, grants for roads are assessed in the Roads category. Since it is not possible to disaggregate general revenue assistance to Indigenous councils, these grants cannot be assessed in the relevant categories. The Northern Territory already includes its general revenue assistance to Indigenous councils in this component.
- 151 Queensland, South Australia and the Northern Territory supported including these grants. Victoria did not support including grants to Indigenous councils in the assessment as the grants cannot be disaggregated by purpose, and may overestimate

²⁵ Queensland Government, [Budget Paper no. 2, 2018-19](https://budget.qld.gov.au/files/BP2-2018-19.pdf), (https://budget.qld.gov.au/files/BP2-2018-19.pdf), [accessed Nov 2018].

²⁶ Northern Territory data return, 2020 Review.

expenses. It also suggested that these grants should be considered in light of grant funding to all councils, which may also receive revenue grants, suggesting a base level of funding required irrespective of Indigenous status. Other States did not comment.

- 152 The Commission considers that the Indigenous community development component should include these grants, given that the Indigenous population in discrete Indigenous communities is likely to approximate the need for State spending for this purpose. The alternative would be to assess them on an EPC basis in the Other expenses category. However, the expense needs for these grants are more likely to be driven by the Indigenous population in discrete Indigenous communities than the total population.

Measuring Indigenous community development expenses

- 153 In the DAP, Commission staff proposed to collect data from the States for Indigenous community development expenses to evaluate the quality of GFS data and to decide the best approach for estimating annual component expenses. There is a separate classification in the current GFS function classification for this spending but the ABS and many States have advised that the detailed data are not reliable.²⁷
- 154 South Australia and Tasmania supported using State data for the assessment. New South Wales had concerns about the GFS data quality and preferred the assessment to be discounted. The ACT supported looking into using State data but considered that the GFS data are generally suitable. Other States did not comment.
- 155 State data returns indicate that using the State data (\$283 million) may provide slightly lower expenses compared to GFS (\$321 million), even after the inclusion of the grants to Indigenous councils. This is due to the greater scrutiny given to the classification of expenses, and the exclusion of ineligible expenses associated with Welfare, natural disaster relief or utilities.
- 156 The Commission intends to use the State data rather than GFS data, and to collect the data from States annually. The estimates of Indigenous community development expenses based on State data are considered reliable, and therefore the Commission does not intend to discount the assessment as suggested by New South Wales.

Other community development

- 157 Victoria, Queensland, South Australia, Tasmania and the ACT broadly agreed with applying an EPC assessment for other community development expenses. Western Australia stated that the land management expenses in this component

²⁷ The new COFOG-A classification of GFS retains a separate class for Indigenous community development.

should be assessed by land area. New South Wales and the Northern Territory did not comment on the disabilities for this component.

- 158 It may be difficult for States to disaggregate their community development and amenities expenses to separate land management expenses. In addition, it is not clear that land area (or even populated land area) is the main determinant of expenses.
- 159 A survey on planning, zoning and development assessment expenses conducted by the Productivity Commission found that expenses varied between States but were not materially different except for the ACT due to National Capital Plan costs (Table 30). While the survey was conducted some time ago, it suggests that land area is not a major driver of expenses. The Commission expects that population, degree of urbanisation, and land use purposes may all contribute to land management expenses, in addition to remoteness and wage costs, and intends to retain the EPC assessment.

Table 30 Planning, zoning and development assessment expenses, from a Productivity Commission survey, 2009-10

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Planning related expenses (\$m)	94	168	168	33	16	1	43	7	529
Planning related expenses (\$pc)	13	31	38	14	10	2	120	30	24

Note: Includes all planning, zoning and development assessment related activities. States may not be comparable due to the structure of their planning agencies. Data were originally sourced from an unpublished survey conducted by the Productivity Commission in 2010.

Source: Productivity Commission, *Performance Benchmarking of Australian Business Regulation: Planning, Zoning and Development Assessments*, 2011, p.373.

Environmental protection

- 160 Victoria, Queensland and South Australia supported an EPC assessment for environmental protection expenses.
- 161 Western Australia stated that national parks and wildlife expenses should be assessed by land area. Tasmania also supported a differential assessment for national parks and wildlife expense but acknowledged that this would be difficult during the current review.
- 162 The ACT intended to investigate whether a policy-neutral disability for national parks and wildlife expenses was available but has not been able to isolate one thus far.
- 163 New South Wales and the Northern Territory did not comment on this particular issue.
- 164 During the 2010 Review, the national parks assessment was the subject of considerable State comment. However, the Commission could not determine the average policy that applied in declaring land to be parks and reserves and therefore

were not able to construct a reliable, policy neutral assessment based on land area. It does not appear that States' practices in reserving land have changed greatly during this time.

165 Due to the difficulty in measuring cost influences, the Commission intends to retain an EPC assessment for environmental protection expenses.

OTHER ISSUES CONSIDERED BY THE COMMISSION

166 There were a number of other issues considered by the Commission, largely in response to concerns raised by States. These issues related to the method for measuring existing disabilities or requests for new disabilities that were not included in the 2015 Review assessment. The main reasons for not assessing certain disabilities identified by States are:

- the conceptual case for a disability has not been established
- an assessment would not be material, that is, redistribute more than \$35 per capita for any State²⁸
- data are not available to make a reliable assessment.

Electricity subsidies

Regional cost weight and service delivery scale cost factor

167 The Northern Territory was concerned that removing the regional cost weight and SDS cost factor could understate remote expenses. The Commission considers that the new regional cost weight derived from electricity data (Table 8) more accurately measures remoteness and SDS costs than the 2015 Review approach. Applying additional weights would introduce double counting.

Adjustment to remote community electricity subsidies

168 In its submission to the DAP, New South Wales noted that part of the subsidies for isolated communities are due to States' uniform electricity tariff policies, and suggested that this portion should be removed from the remote community electricity subsidy due to double counting.

169 This part of the subsidy for isolated communities is a very small proportion of the total subsidy. Given its small size, the Commission does not intend to remove this

²⁸ The Commission has set a materiality threshold for including a disability. The materiality test applies to the total impact the disability has on the redistribution across all revenue or expense categories in which it is assessed. To be included, a disability assessment must redistribute more than \$35 per capita away from an EPC assessment for any State.

part of the subsidy because it would complicate the analysis without having a material impact.

The SWIS electricity network in Western Australia

- 170 The South West Interconnected System (SWIS) in Western Australia is an electricity network that covers Perth and much of the south west region of Western Australia. In its submission to the DAP, Western Australia argued that the SWIS electricity network should be assessed as requiring subsidies due to its higher costs compared to the National Energy Market (NEM), which are due to fuel type, customer density and isolation. Western Australia stated that although SWIS is not receiving explicit subsidies from 2018-19 onwards, it is not paying a high level of dividends to the Government, so the Commission should assess an implicit subsidy.
- 171 The Commission considers there is limited evidence that subsidies in non-remote areas (which are likely more densely populated) are due to an underlying cost disability. The subsidies to most of the Ergon East, Darwin-Katherine networks and outer regional areas for Ergon West appear to fall into this category (Table 17 and Table 18). Table 31 shows that prices for consumers serviced by electricity networks are different between States, but the States with the highest prices are not necessarily those that provide subsidies to network customers. For instance, Victoria and South Australia had the highest electricity prices for on-grid areas in 2017-18, but did not provide subsidies for these areas.²⁹ Western Australia said the above average prices for the SWIS reflect an underlying cost disability. The Commission investigated Western Australia's claims during the 2015 Review and concluded that the higher costs for the SWIS are mainly the result of its policies.

²⁹ The high prices for South Australia and Victoria in 2017-18 may have been partly due to closures of major power stations in recent years which reduced electricity supply. South Australia is also the most gas-dependent region in the NEM and is vulnerable to rising gas prices. Victoria is affected by population growth and increased demand.

Table 31 Cost components in representative residential electricity prices for on-grid consumers, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT (a)	Ave
	c/kWh	c/kWh	c/kWh	c/kWh	c/kWh	c/kWh	c/kWh	c/kWh	c/kWh
Regulated networks									
Transmission	3.03	2.04	2.36	1.50	2.89	2.76	1.06		2.36
Distribution	11.19	10.58	11.11	13.31	11.45	8.03	6.04		11.11
Total networks	14.23	12.63	13.47	14.80	14.34	10.79	7.10	12.87	13.47
Wholesale	12.44	14.51	13.23	13.25	17.80	8.88	9.55	14.69	13.23
Environmental policies									
LRET	0.76	0.75	0.76	0.76	0.78	0.93	0.78	0.71	0.76
SRES	0.32	0.32	0.32	0.33	0.33	0.40	0.33	0.30	0.32
Other (b)	0.62	0.60	0.53	-	1.31	-	2.40	-	0.53
Total environment	1.71	1.67	1.62	1.09	2.43	1.32	3.50	1.01	1.62
Residual (c)	2.19	4.33	2.87	2.50	3.21	2.63	3.52	-2.69	2.87
Total	30.57	33.13	31.19	31.64	37.79	23.62	23.68	25.88	31.19

Note: Queensland's costs refer to south east Queensland only. Western Australia's costs refer to the SWIS only and include a State subsidy of 1.51c/kWh; the total price paid by residents is 30.13c/kWh. Costs for other States reflect their on-grid consumers only, which excludes some remote communities in South Australia, Tasmania and the Northern Territory. LRET: Large-scale Renewable Energy Targe; SRES: Small-scale renewable energy scheme. Prices may differ due to differences in representative consumers and consumption between States.

(a) The Northern Territory's costs are understated, as an unknown retail component has been omitted. Prices reflect consumers on the Darwin-Katherine interconnected system only.

(b) Other environmental policies include solar Feed-in Tariffs and other State schemes.

(c) Includes retail costs and retail margins.

Source: Australian Energy Market Commission (AEMC), 2017 Residential Electricity Price Trends.

172 The Commission does not accept Western Australia's argument that an implicit subsidy should be assessed for the SWIS, where services are provided by Synergy, a government owned corporation. It is not clear that the higher costs in the SWIS are due to unavoidable factors such as customer density and isolation.

Water subsidies

Water quality

173 South Australia supported assessing water quality and availability issues. The Commission acknowledges that water quality is a factor that drives States' costs, but was unable to derive a simple and reliable way of measuring this. Many datasets that measure quality do not offer national coverage specific to urban water, or do not disaggregate water used for residential purposes. The assessment requires information about non-metropolitan areas, which are the main areas that receive subsidies, yet these areas are not well-covered by the publicly available urban water data, which tends to focus on communities with more than 10 000 customers.

Water availability

- 174 Western Australia argued that accessibility is an issue for some communities, including Kalgoorlie, which relies on a 600 kilometre pipeline from Mundaring Weir near Perth for its water supply. WaterNSW is currently constructing a 270 kilometre pipeline from Wentworth to Broken Hill to provide long-term water security for Broken Hill. Due to the high cost of the pipeline, New South Wales Government has announced it will not recoup the full cost from customers.
- 175 The Commission investigated data from Western Australia and the Northern Territory using both Western Australia’s distance from the water source measure included in the State’s data return, and a distance from the water source measure developed by GeoScience Australia.³⁰ However, there was no apparent relationship between the distance from the water source and subsidy levels (Table 32). This is likely due to this measure only considering surface water sources, whereas Western Australia and the Northern Territory source much of their water from groundwater. The Commission has not been able to find similar availability data for groundwater that could be used in an assessment of residential water subsidies.

Table 32 Water subsidies for small communities, by the community’s distance from the water source, 2015-16

	Close (0-20km)	Moderate (21-50km)	Far (50-125km)	Very far (125km+)
	\$pc	\$pc	\$pc	\$pc
WA	3 318	2 130	2 297	2 823
NT	950	978	917	952
Average	3 044	1 882	1 849	1 365

Note: Only communities that could be matched to a UCL are included.

Source: State data for the 2020 Review and unpublished data from GeoScience Australia using the AusHydro dataset (see the [Australian Water Information Dictionary](http://www.bom.gov.au/water/awid/id-41.shtml), (<http://www.bom.gov.au/water/awid/id-41.shtml>), [accessed 23 Apr 19]).

- 176 Western Australia proposed two approaches for assessing water subsidies to capture environmental influences:
- an assessment based on actual per capita costs minus the national average revenue from user charges, or
 - a differential assessment using the populations in isolated outer regional towns serviced by exceedingly long pipelines, in addition to the total population in remote and very remote areas.

- 177 There are a number of issues with Western Australia’s first approach.

³⁰ The distance to the water source is equal to the length of a straight line from an inside point generated within the UCL to the nearest point on the closest water source, either a major river, lake or reservoir using the AusHydro dataset.

- Only Victoria, Western Australia and the Northern Territory have been able to provide comprehensive cost data.
- An approach based on actual cost data would require an assumption that water providers, including State owned water providers in Western Australia, South Australia and the Northern Territory, operate at the average level of efficiency. The Commission would not be confident in this assumption.
- Using national average revenue from user charges as the benchmark cost recovery level is not consistent with what States do and average policy. Under the National Water Initiative Pricing Principles, to which all States have agreed, the aim is to recover the full cost for all surface and groundwater based systems in urban areas. There is an exception for some small community services to recognise they will never be economically viable but need to be maintained to meet social and public health obligations. Given the national policy and level of State compliance, the benchmark revenue from user charges would need to be State average revenue from user charges not national average revenue.

178 The Commission does not agree with making an additional assessment for populations in isolated outer regional towns serviced by exceedingly long pipelines, due to the lack of conclusive evidence about the relationship between distance from surface water sources and subsidies. More broadly, all States have pipelines to support service delivery. The Commission does not intend to make an exception for the Kalgoorlie-Boulder pipeline.

Service delivery scale for water subsidies

179 During the 2015 Review, a general SDS disability was applied to recognise higher costs incurred by very small utilities. The Commission found some evidence that very small communities (with less than 200 people) were on average more expensive compared to other small communities (200+ to 1 000 people, Table 33).

Table 33 Water subsidies by population group and ABS remoteness areas, 2015-16

Population group	Inner regional	Outer regional	Remote	Very remote	Average
	\$pc	\$pc	\$pc	\$pc	\$pc
51 to 200	5 163	5 265	4 582	6 245	5 280
201 to 1 000	1 131	2 523	3 123	1 671	1 953
Average	1 333	3 019	3 474	2 041	2 371

Source: Data from Western Australia and the Northern Territory for the 2020 Review.

180 The water regional cost weights likely captures SDS in addition to remoteness, as outer regional, remote and very remote communities are more likely to be very small compared to inner regional communities. Therefore, the Commission has decided not to apply an additional SDS weight to the small community water subsidies. Applying additional weights would introduce double counting.

REDISTRIBUTION FROM AN EPC ASSESSMENT

181 Table 34 shows the extent to which the assessment for this category differs from an EPC assessment of services to communities expenses. States with a positive redistribution are assessed to have above average spending requirements and States with a negative redistribution are assessed to have below average spending requirements. In per capita terms, the Northern Territory experiences the largest redistribution.

Table 34 Redistribution from an EPC assessment, Services to communities, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	-227	-225	51	147	0	3	-15	267	468
\$ per capita	-29	-35	10	57	0	6	-37	1 080	19

Note: The redistribution is the difference from an EPC assessment of category expenses.

Source: Preliminary staff estimate.

182 The main reasons for these redistributions are the differences between States in their distributions of remote and small communities. In particular:

- New South Wales, Victoria and the ACT have below average shares of people living in remote and very remote areas and small communities
- New South Wales, Victoria, South Australia, Tasmania and the ACT have below average shares of people living in discrete Indigenous communities
- Queensland, Western Australia and the Northern Territory have above average shares of people living in remote and very remote areas, along with above average shares of people living in discrete Indigenous communities
- Western Australia, South Australia, Tasmania, and the Northern Territory have above average shares of people living in small communities.

183 Table 35 provides a summary of the main disabilities contributing to the redistribution from an EPC assessment for this category.

Table 35 Major reasons for the redistribution, Services to communities, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Remote communities	-133	-122	41	97	8	-2	-8	119	265
Small communities	-20	-25	-12	30	6	11	-4	14	62
Indigenous communities	-68	-73	23	17	-12	-6	-5	123	163
Regional costs	-7	-16	9	8	4	1	-5	5	28
Wage costs	4	2	-2	-2	-4	-1	2	1	9
Total	-227	-225	51	147	0	3	-15	267	468

Note: The redistributions from an EPC assessment are illustrative. Disabilities may not add up due to rounding and interactions.
Regional costs for remote communities and small communities are included in the first two rows and not the regional costs row, as the regional cost weights for these communities also include some SDS elements.

Source: Commission calculation.

UPDATING THE ASSESSMENT

184 As required by the terms of reference, the Commission will incorporate the latest available data in the assessment during the annual updates. This will allow the assessment to reflect changes in State circumstances.

- The following data will be updated annually:
 - electricity subsidy expenses and the split between remote community electricity subsidies and other electricity subsidies
 - water subsidy expenses and the split between small community water subsidies and other water subsidies
 - Indigenous community development expenses
 - other community development expenses
 - environmental protection expenses (as a residual)
 - protection of biodiversity and landscape sub-component expenses.
- Some of the assessment data are not readily available on an annual basis, or remain stable over time. These data will not be updated during the review period:
 - remote community electricity subsidy regional cost weights
 - small community water subsidy regional cost weights.
- The following population data are based on the 2016 Census, and will be updated when newer Census data are available:
 - State population shares of people living in remote communities that are assessed as needing remote community electricity subsidies

- State population shares of people living in small communities that are assessed as needing small community water subsidies.

OUTSTANDING ISSUES

- 185 The Commission will request the following data from States to finalise this assessment.
- Electricity subsidies data and water subsidies data for 2016-17, 2017-18 and 2018-19.
 - Indigenous community development data for 2018-19, and previous years for some States.

FURTHER CONSULTATION

- 186 Before the release of the final report by 28 February 2020, there will be opportunities for consultation on this assessment. For further information about this category, please contact Anli Chin on anli.chin@cgc.gov.au.

ATTACHMENT 16

JUSTICE

Summary of proposed changes to the 2015 Review methodology

- In police,
 - the split between ‘specialised’ and ‘community’ expenses has been removed, including the discount previously applied to specialised policing expenses
 - police costs are assessed using cost weights derived from a regression analysis of police districts predicting police costs per capita, and incorporating an assessed offenders measure using age, SES and Indigenous status
 - no separate regional costs factor has been applied, as regional costs are implicitly captured within the model
 - there are minor changes to the way the number of offenders is assessed. The non-Indigenous population is assessed against five SES groups, rather than three, and offender rates have now been assessed for the 0-14 and 65+ year age groups, rather than assessing a zero offender rate for these age groups.
- In courts and other legal services,
 - in place of having a Courts component split into criminal and civil courts sub-components, two separate components have been identified, Criminal courts and Other legal services
 - Indigenous status non-response has been allocated in proportion to the population shares, rather than responding criminal court defendant shares
 - regional costs have been measured directly from court cost data, rather than extrapolated on the basis of police regional costs
 - defendant rates have now been assessed for the 0-14 and 65+ year age groups, rather than assessing a zero defendant rate for these age groups

- In prisons,
 - regional costs have been measured directly from prison cost data, rather than using police regional costs
 - imprisonment rates have now been assessed for the 0-14 and 65+ year age groups, rather than assessing a zero offence rate for these age groups.

1 This attachment contains the Commission’s draft proposals for the Justice category following consultation with the Commonwealth and States.

SERVICE OVERVIEW

2 State expenses on Justice were \$20 billion in 2017-18, representing 9.2% of total State expenses (Table 1). State spending on this function comprises expenses for:

- Policing services, which can be broadly divided into five service delivery areas:
 - prevent, detect and investigate crime
 - monitor and promote road safety including enforcing traffic law
 - maintain social order including resolving disputes, dealing with drug/alcohol affected people and dealing with domestic violence
 - community safety and support including crime prevention programs, dealing with community safety concerns, policing major events, performing and coordinating emergency and rescue operations
 - bring offenders to justice, including attending and preparing for court hearings and transporting defendants to court.
- Criminal courts:
 - Criminal court services are provided in each State and are hierarchical in nature. The seriousness and complexity of cases heard at each court level varies across States.
 - Within the judicial sector a number of agencies have roles that directly or indirectly relate to the work of criminal courts. These include public prosecution and legal aid. These related legal expenses are included in the Criminal courts assessment.
- Other legal services:
 - Other legal services entails court and legal expenses not included in criminal courts. It includes civil courts, Attorneys General departments, crown solicitors, law reform commissions and a range of other functions.
 - The expenses split between Criminal courts and Other legal services is calculated using budgetary information provided to the Commission by

States and their advice on what expenses are related or not related to Criminal courts.

- Prisons:
 - Prison services include the administration, support and operation of prisons and other places of secure detention, both Government and privately run, for convicted persons and alleged offenders. The facilities offer varying levels of security from maximum through to low security prison farms.
 - Juvenile detention is included in the prison assessment.
 - The prison assessment also includes the administration and operation of community-based corrections. It includes administering people on parole, those undertaking community service and home detention.

Table 1 State expenses on Justice, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Total expenses (\$m)	5 851	5 052	3 634	2 800	1 389	396	281	610	20 013
Total expenses (\$pc)	739	791	732	1 084	803	755	676	2 472	808
Proportion of operating expenses (%)	8.7	10.1	8.1	11.2	9.1	8.2	6.9	11.3	9.2

Note: Expenses shown on a gross basis.

Source: Commission calculation using State budget data.

3 The Justice category excludes public order and safety services related to:

- fire protection services
- control of domestic animals and livestock
- public order and safety, not elsewhere classified.

4 These expenses are assessed in the Other expenses category.

5 Table 2 shows the share of State expenses on Justice from 2014-15 to 2017-18.

Table 2 State expenses on Justice, 2014-15 to 2017-18

	2014-15	2015-16	2016-17	2017-18
Total expenses (\$m)	17 134	18 001	19 002	20 013
Proportion of total operating expenses (%)	9.2	9.3	9.4	9.2

Note: Expenses shown on a gross basis.

Source: Commission calculation using ABS Government Finance Statistics (GFS) and State budget data.

6 User charges (Table 3) were \$1.6 billion in 2017-18. States cost-recover some expenses associated with justice services, predominantly within the Other legal services component but also to a lesser extent by some police provided services such as policing at special events.

- 7 In this category, the expense disabilities are not appropriate to apply to the user charges, and there are no other reliable data available. Therefore, Justice user charges are assessed equal per capita (EPC) in the Other revenue category.

Table 3 Justice user charges, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Revenue (\$m)	397	498	200	199	189	50	16	28	1 578
Revenue (\$pc)	50	78	40	77	109	96	39	113	64

Note: User charges refer to revenue from the sale of goods and services classified in GFS to economic type framework (ETF) 112.

Source: Commission calculation using ABS GFS and State budget data.

- 8 The ACT asked that user charges be presented in the Justice category to make it more transparent. For simplicity the Commission regards the Other revenue category as the most appropriate place to make the assessment, given it is not differentially assessed.

State and Commonwealth roles and responsibilities

Policing

- 9 State police forces enforce the laws of their respective States.
- 10 The Australian Federal Police (AFP) enforces Commonwealth law, and deals with issues affecting crime and security at a more national level. This includes crimes like human trafficking, trafficking of drugs in and out of Australia, counterfeiting of currency, fraud against the Commonwealth and intellectual property crime. They patrol, and have exclusive jurisdiction, at most major airports.
- 11 The AFP provides State-type policing services to the ACT on a cost-recovery basis.
- 12 State and Federal police may work together on certain investigations, as some crimes can be both State and federal.

Criminal courts

- 13 State criminal courts have almost exclusive jurisdiction to hear matters relating to indictable offences, whether they occurred under Commonwealth or State law. The sole exception are matters dealing with making a contract containing a cartel provision and giving effect to a cartel provision, which are heard by the Federal Court.
- 14 Summary offences against a number of Commonwealth Acts are dealt with by the Federal Court. However, State courts deal with all matters relating to State law as well as some offences related to Commonwealth law not under the jurisdiction of the Federal Court.

Other legal services

- 15 States provide civil law court services to address civil disputes arising under State law while almost all civil matters arising under Australian federal law are under the Federal Court’s jurisdiction.
- 16 Family court services are provided by the Commonwealth, except in Western Australia where the Family Court of Western Australia provides the service with funding from the Commonwealth.
- 17 A number of other legal-related services are provided by States, including registrars, law commissions and public prosecution.
- 18 States run legal aid commissions, which provide legal assistance to the community for both State and Commonwealth matters. The Commonwealth provides approximately one-third of legal aid funding.

Prisons

- 19 There are no federal prisons in Australia. States are responsible for housing both State and federal prisoners.

Commonwealth payments

- 20 In addition to general revenue assistance, the Commonwealth provides funding to the States for justice services, comprising mainly legal aid services.
- 21 Table 4 shows that other than legal aid, the Commonwealth provides very little direct support to the States for justice services.

Table 4 Commonwealth payments to the States for Justice, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Grants for Indigenous purposes (police) (\$m)	0	0	14	0	1	0	0	0	15
Legal Aid (\$m)	78	60	52	31	20	7	6	7	262
Family Advocacy and Support Services (\$m)	2	1	1	1	1	1	1	1	7
Total (\$m)	79	61	68	31	22	8	6	8	284
Total (\$pc)	10	10	14	12	12	15	16	32	11

Note: Commonwealth own purpose expenses (COPEs) are not included. Payments that the Commission treats as ‘no impact’ are included in the table.

Source: Commonwealth *Final Budget Outcome, 2017-18*.

- 22 Legal aid and family advocacy payments have no effect on State fiscal capacities. Grants for Indigenous purposes do affect State fiscal capacities.

CATEGORY STRUCTURE

- 23 The assessment of the Justice category is undertaken in four components:
- police
 - criminal courts
 - other legal services
 - prisons.
- 24 Components allow different disability assessments to apply to sub-functions.
- 25 Table 5 shows the category's assessment structure, the size of each component and the disabilities that apply.

Table 5 Category structure, Justice, 2017-18

Component	Component expense	Disability	Influence measured by disability
	\$m		
Police	10 657	Regional costs	Recognises that the cost of providing policing services increases as the level of remoteness increases.
		Offenders — socio-demographic composition	Recognises that certain population groups (defined by Indigenous status, age, and SES status) receive more police attention than others, and therefore affect the cost of policing.
		Wage costs	Recognises the difference in wage costs between States.
		National capital	Recognises the additional costs incurred by the ACT as a result of its reliance on the AFP as the provider of its policing services.
Criminal courts	2 235	Socio-demographic composition	Recognises that certain population characteristics (Indigenous status, age, and SES status) affect the use of criminal court services.
		Regional costs	Recognises the additional costs of providing services in sparsely populated and remote areas.
		Wage costs	Recognises the difference in wage costs between States.
Other legal services	2 353	Regional costs	Recognises the additional costs of providing services in sparsely populated and remote areas.
		Wage costs	Recognises the difference in wage costs between States.
Prisons	4 768	Socio-demographic composition	Recognises that certain population characteristics affect the use of services, for example, Indigenous status, age, and SES status.
		Regional costs	Recognises the additional costs of providing services in remote areas.
		Wage costs	Recognises the difference in wage costs between States.

Source: Commission calculation using ABS GFS and State budget data.

Category and component expenses

- 26 The main data sources for calculating category and component expenses are ABS Government Finance Statistics (GFS) and State budget data.¹
- 27 A split of GFS estimates of Court and legal services expenses, into Criminal courts and Other legal services, is derived from expense data received from States. This split is

¹ Unless otherwise stated, category and component expenses for the first two assessment years are sourced from ABS GFS. States provide data for the most recent assessment year because GFS data are not available in time for the annual update.

calculated using 2016-17 data, and is intended to be applied in all updates using the 2020 Review methods.

ASSESSMENT APPROACH

Police

- 28 Expenses for this component include:
- police services
 - research and development – public order and safety.
- 29 The police assessment is based upon the geographic distribution of State populations and the number of assessed offenders in a jurisdiction, with adjustments for wage costs and a national capital allowance for the ACT.

Policing task – population

- 30 Spending on the policing task increases the more remote the geographic distribution of a State's population. Additional loadings (or cost weights), derived from Commission modelling, are applied to State populations depending on their level of remoteness:
- people living in major cities — 1.0
 - people living in inner regional areas — 1.5
 - people living in outer regional areas — 1.6
 - people living in remote areas — 3.2
 - people living in very remote areas — 9.5.

Policing task – assessed offenders

- 31 Offender numbers are also a significant driver of police expenses.² A cost weight, derived from Commission modelling, of 20.5 per offender is applied to the number of assessed offenders for each assessment year.
- 32 Offending rates are higher among some population groups than others. The number of assessed offenders is derived by applying the national average offender rate for a given socio-demographic sub-population to a State's share of such populations. The

² An offender is a person against whom the police proceed following an alleged offence. The nature of the proceeding may be arrest, an official caution, or a range of other actions. An individual proceeded against on multiple occasions for different offences will be counted multiple times. A reported crime for which police do not identify a suspect will not be included. Police investigations where no offender is proceeded against, or police work to disrupt or discharge potential criminals, are not recorded in the data.

socio-demographic groups include a cross-classification of Indigenous status, SES and age. In total, there are 40 socio-demographic groups as shown in Table 6.

Table 6 Socio-demographic groups used in police – assessed offender calculation

Indigenous status and socio-economic status (a)		Age
Indigenous (IRSEO)	Most disadvantaged (40%)	0-14
	Middle quintile (20%)	15-24
	Least disadvantaged (40%)	25-44
Non-Indigenous (NISEIFA)	Most disadvantaged (20%)	45-64
	2nd most disadvantaged (20%)	65+
	Middle quintile (20%)	
	2nd least disadvantaged (20%)	
Least disadvantaged (20%)		

(a) SES is measured using IRSEO (Indigenous Relative Socioeconomic Outcomes) for the Indigenous population and NISEIFA (Non-Indigenous Socio-Economic Index for Areas) for the non-Indigenous population.

Source: Commission decision.

Wage costs

33 Differences in wage costs between States have a differential effect on the cost of providing services. There is a general method for measuring the influence of wage costs in components where the disability applies. For a description of the method, see Attachment 24 – Wage costs.

National capital

34 The police assessment includes a national capital allowance for police services, recognising the higher salaries paid to Australian Federal Police (AFP) staff compared to staff of State police forces and the legislated use of this service by the ACT (see Attachment 26 – Other disabilities).

Data and methods

35 The policing task is based upon cost weighted populations and cost weighted assessed offenders. The cost weights were derived from regression analysis of a model of police spending patterns developed by the Commission based upon State provided data.

36 The number of assessed offenders is calculated by applying the national offending rates of the population, cross-classified by Indigenous status, SES and age, to those population groups in each State. The weighted policing task is assessed by applying different cost weights per capita for each remoteness area, plus an additional cost weight for each assessed offender. Total national GFS spending is then allocated between the States in proportion to their share of the weighted policing task.

37 Table 7 shows the calculation of the policing task for 2017-18. The per capita cost weights are applied to the population of each remoteness area for the assessment year. The offender cost weight of 20.5 is applied to the number of assessed offenders for the assessment year. Together these sum to the total weighted policing task. This weighted policing task of 45 million is rescaled to match the \$11 billion of GFS stated police expenses to derive the policing task assessed expenses (prior to the allocation of the wage costs and national capital disabilities).

Table 7 Illustrative assessment, policing task calculations, 2017-18

	Cost weight	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
		'000	'000	'000	'000	'000	'000	'000	'000	'000
Major city population	1.0	5 961	4 967	3 167	2 017	1 270	0	416	0	17 798
Inner regional population	1.5	1 479	1 165	977	224	222	356	1	0	4 423
Outer regional population	1.6	446	250	693	187	177	159	0	148	2 060
Remote population	3.2	30	3	73	86	45	8	0	48	293
Very remote population	9.5	6	0	55	70	14	3	0	50	197
Cost weighted population		9 077	7 154	6 508	3 593	2 164	844	417	866	30 621
Assessed offenders	20.5	231	160	156	75	52	18	8	20	719
Cost weighted offenders		4 745	3 276	3 197	1 536	1 063	366	166	414	14 762
Total cost weighted policing task		13 822	10 429	9 704	5 129	3 227	1 210	582	1 280	45 383
		\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Policing task assessed expenses rescaled to GFS		3 246	2 449	2 279	1 204	758	284	137	301	10 657

Source: Commission calculation.

Component calculations

38 As shown in Table 8, a wage costs factor and national capital allowance are applied to the policing task assessed expenses to calculate final total assessed expenses for the police component in 2017-18.

Table 8 Illustrative assessment, Police, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Policing task (\$m)	3 246	2 449	2 279	1 204	758	284	137	301	10 657
Wage cost factor	1.007	1.004	0.995	0.992	0.971	0.966	1.055	1.034	1.000
National capital allowance (\$m)	-2	-2	-2	-1	-1	0	8	0	0
Assessed expenses (\$m)	3 266	2 458	2 267	1 194	735	274	152	311	10 657
Assessed expenses (\$pc)	412	385	457	462	426	523	365	1 259	430

Source: Commission calculation.

39 Data for both the cost weights and the socio-demographic composition (SDC) calculations were provided by States for the years 2015-16 and 2016-17, and have been benchmarked to ABS demographic data for 30 June 2016.

Criminal courts

40 Expenses for this component include:

- criminal courts
- public prosecution
- legal aid related to defendants in criminal courts
- other legal services associated with criminal courts.

41 GFS data identify total costs associated with courts and legal services. The criminal courts related proportion of this is calculated based on a one-off data request to States. The State data indicated that 51% of courts and legal services expenses related to criminal courts.

42 The Criminal court assessment is based on an SDC assessment of the number of defendants with adjustments for wage costs and regional costs.

Socio-demographic composition

43 Spending by each State on criminal court services is affected by the size of its population and the relative size of those population groups that are more likely to appear before a court. The number of assessed defendants is derived by applying the national average defendant rate for a given socio-demographic sub-population to a State's share of such populations. The socio-demographic groups include a cross-classification of Indigenous status, SES and age. There are 50 socio-demographic groups based on the categories shown in Table 9.

Table 9 Socio-demographic groups used in criminal courts and prisons assessments

Indigenous status and socio-economic status (a)		Age
Indigenous (IRSEO)	Most disadvantaged (20%)	0-14
	2nd most disadvantaged (20%)	15-24
	Middle quintile (20%)	25-44
	2nd least disadvantaged (20%)	45-64
	Least disadvantaged (20%)	65+
Non-Indigenous (NISEIFA)	Most disadvantaged (20%)	
	2nd most disadvantaged (20%)	
	Middle quintile (20%)	
	2nd least disadvantaged (20%)	
	Least disadvantaged (20%)	

(a) SES is measured using IRSEO (Indigenous Relative Socioeconomic Outcomes) for the Indigenous population and NISEIFA (Non-Indigenous Socio-Economic Index for Areas) for the non-Indigenous population.

Source: Commission decision.

44 Data on the SDC profile of defendants include only New South Wales, Queensland, Western Australia, South Australia, and Northern Territory as other States were unable to provide Indigenous status for their defendants.

Regional costs

45 State provided data on the cost per court case in different regions has informed the Commission’s judgment that providing criminal court services in remote and very remote areas incurs an additional 10% higher cost compared to non-remote areas.³

Wage costs

46 Differences in wage costs between States have a differential effect on the cost of providing services. There is a general method for measuring the influence of wage costs in components where the disability applies. For a description of the method, see Attachment 24 — Wage costs.

Data and Methods

47 SDC groups are derived from State provided data⁴ on the number of defendants by Indigenous status, SES, and age as described in Table 9 for the years 2015-16 and 2016-17.

³ As the distribution of defendants by region is not assessed, the regional costs factors are calculated based upon the regional distribution of ERP in each State.

⁴ State data include only New South Wales, Queensland, Western Australia, South Australia, and Northern Territory as other States were unable to provided Indigenous status for their defendants.

- 48 A defendant rate for each Indigenous status/SES/age subgroup is calculated as the ratio of defendants to populations. A summary of the patterns observed from the State provided data on defendants can be seen in Figure 9 to Figure 12. The Commission does not intend to recollect these data for the duration of the 2020 Review period. The defendant rates derived from the State data will be fixed for the period of the Review, and these fixed rates applied to each assessment year population, to generate assessed defendants for those years.
- 49 Data about the cost of courts in regional areas have been provided by the States. The cost weight derived by the Commission from these data will be fixed for the period of the Review.

Component calculations

- 50 Table 10 shows the calculation of total assessed expenses for the component in 2017-18.

Table 10 Illustrative assessment, Criminal courts, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SDC assessed (\$m)	712	524	470	235	162	52	27	54	2 235
Regional costs factor	0.998	0.998	1.001	1.004	1.001	1.000	0.998	1.038	1.000
Wage costs factor	1.007	1.004	0.995	0.992	0.971	0.966	1.055	1.034	1.000
Assessed expenses (\$m)	714	524	468	235	157	50	28	59	2 235
Assessed expenses (\$pc)	90	82	94	91	91	95	67	241	90

Note: The interactions between SDC and regional costs are not shown in this table.

Source: Commission calculation.

Other legal services

- 51 Other legal services entails court and legal expenses not included in Criminal courts. Expenses for this component include:
- civil courts
 - Attorneys General departments
 - crown solicitors
 - law reform commissions.
- 52 Expenses within Other legal services will be assessed on an EPC basis, as neither the Commission nor States have identified any conceptual basis for certain groups to be higher users of these services.

Regional costs

- 53 Similarly as for Criminal courts, residents of remote areas are judged by the Commission to cost 10% more than residents of non-remote areas for the delivery of

civil court services. As most other legal-related services are provided from a centralised location, the regional factor will only apply to the court-related costs which, are about 40% of Other legal services expenses.

Wage costs

54 Differences in wage costs between States have a differential effect on the cost of providing services. There is a general method for measuring the influence of wage costs in components where the disability applies. For a description of the method, see Attachment 24 — Wage costs.

Data and methods

55 Other legal services are assessed on an EPC basis, with an adjustment for the higher cost of providing civil courts in regional areas, and an adjustment for wage costs.

Component calculations

56 Table 11 shows the calculation of total assessed expenses for the component in 2017-18.

Table 11 Illustrative assessment, Other legal services, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
EPC assessed (\$m)	753	607	472	245	164	50	40	23	2 353
Regional costs factor	1.000	0.999	1.000	1.001	1.000	1.000	0.999	1.011	1.000
Wage costs factor	1.007	1.004	0.995	0.992	0.971	0.966	1.055	1.034	1.000
Assessed expenses (\$m)	757	609	469	244	160	48	42	25	2 353
Assessed expenses (\$pc)	96	95	95	94	92	92	100	99	95

Source: Commission calculation.

Prisons

57 Expenses for this component include:

- expenses associated with prisons
- expenses associated with juvenile detention
- expenses associated with community corrections which may include
 - supervision through home detention, parole or bail
 - program participation
 - community work orders.

58 The prison assessment is based on an SDC assessment of the number of prisoners with adjustments for wage costs and regional costs.

Socio-demographic composition

59 Spending by each State on prisons is affected by the size of its population and the relative size of those population groups that are more likely to be in prison. The number of assessed prisoners is derived by applying the national average prisoner rate for a given socio-demographic sub-population to a State's share of such populations. The socio-demographic groups include a cross-classification of Indigenous status, SES and age. There are 50 SDC groups with the same composition as that of criminal courts (see Table 9). SES data are extrapolated from defendant data.

Regional costs

60 The Commission has developed a model based on State provided data that allocates regional costs and service delivery scale costs. Remote areas (remote and very remote) are estimated to be 9% more expensive than non-remote areas.

Wage costs

61 Differences in wage costs between States have a differential effect on the cost of providing services. There is a general method for measuring the influence of wage costs in components where the disability applies. For a description of the method, see Attachment 24 — Wage costs.

Data and method

62 SDC groups are derived from a combination of ABS and State provided data. ABS data provide the number of prisoners by Indigenous status (Indigenous and non-Indigenous) and age (five groups), updated on an annual basis.

63 Socio-economic status is derived from State court defendant data, which uses five Indigenous Relative Socioeconomic Outcomes (IRSEO) groups for the Indigenous population, and five Non-Indigenous Socio-Economic Index (NISEIFA) groups for the non-Indigenous population.⁵

64 SES is imputed by splitting the number of prisoners for each Indigenous and age group combination on a weighted population basis according to the relative SES rates for Indigenous and non-Indigenous defendants.

65 The regional costs weight is derived from prisoner cost data provided by States.

⁵ States include New South Wales, Queensland, Western Australia, South Australia and Northern Territory. These are States for which Indigenous status of defendants is available.

Component calculations

66 Table 12 shows the calculation of total assessed expenses for the component in 2017-18.

Table 12 Illustrative assessment, Prisons component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SDC assessed (\$m)	1 499	988	1 047	539	332	112	54	197	4 768
Regional costs factor	0.999	0.998	1.001	1.004	1.001	1.000	0.998	1.034	1.000
Wage cost factor	1.007	1.004	0.995	0.992	0.971	0.966	1.055	1.034	1.000
Assessed expenses (\$m)	1 499	984	1 042	541	322	107	57	216	4 768
Assessed expenses (\$pc)	189	154	210	209	186	204	137	876	192

Source: Commission calculation.

CATEGORY CALCULATIONS

67 Table 13 brings the assessed expenses for each component together to derive the total assessed expenses for each State for the category. It shows at the component level how each disability assessment moves expenses away from an EPC distribution to obtain assessed expenses.

Table 13 Illustrative category assessment, Justice, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Police									
EPC	430	430	430	430	430	430	430	430	430
SDC	1	-19	11	0	4	24	-46	254	0
Remoteness	-21	-27	18	36	4	87	-55	534	0
Wage costs	3	2	-2	-3	-12	-14	24	15	0
National capital	0	0	0	0	0	0	18	0	0
Assessed expenses	412	385	457	462	426	523	365	1 259	430
Criminal courts									
EPC	90	90	90	90	90	90	90	90	90
SDC	0	-8	4	1	4	8	-26	128	0
Wages	1	0	0	-1	-3	-3	5	3	0
Regional costs	0	0	0	0	0	0	0	3	0
Assessed expenses	90	82	94	91	91	95	67	241	90
Other legal services									
EPC	95	95	95	95	95	95	95	95	95
Wages	1	0	0	-1	-3	-3	5	3	0
Regional costs	0	0	0	0	0	0	0	1	0
Assessed expenses	96	95	95	94	92	92	100	99	95
Prisons									
EPC	192	192	192	192	192	192	192	192	192
SDC	-3	-38	18	16	0	20	-62	605	0
Wages	1	1	-1	-1	-6	-6	11	7	0
Regional costs	0	0	0	1	0	0	0	6	0
Assessed expenses	189	154	210	209	186	204	137	876	192
Total assessed expenses	787	716	856	857	795	914	669	2 475	808

Note: Table may not add due to interactions between disabilities and rounding. The EPC expenses and assessed expenses are total spending per capita. The amounts for each disability are redistributions from an EPC assessment.

Source: Commission calculation.

INFRASTRUCTURE ASSESSMENT

68 States require infrastructure to support service delivery. State infrastructure requirements are assessed in the Investment category. The main driver of investment in Justice related Infrastructure is growth in the weighted justice service using population, which is a combination of offenders, defendants and prisoners, and the general population using police services and other legal services. It is simply

calculated as proportional to the Justice assessed expenses excluding regional costs, wage costs and national capital influences.

- 69 Interstate differences in construction costs are also recognised.
- 70 For a description of the Investment assessment, see Attachment 21 — Investment.

ASSESSMENT ISSUES

- 71 The 2015 Review assessment provided the starting point for the 2020 methodology review. In April 2018, Commission staff released a draft assessment paper setting out staff proposals for the Justice category. States provided submissions on the proposals. The staff proposals and State submissions are available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).
- 72 The main assessment issues for the category were:
- the development of a new model explaining police costs
 - deriving regional costs for courts and prisons
 - the appropriate socio-economic profile to assess each of the components.
- 73 While States were generally receptive to the idea of a new model to explain police costs this was conditional on the final model presented to them. Likewise, States' general support of applying regional costs to the Justice component was conditional on how these regional costs were derived.
- 74 The following sections discuss the main issues for the category, including State views.⁶

Assessing the policing task

- 75 The 2015 Review police assessment divided police expenses into those targeting criminal activity, and those targeting community policing on a 50:50 basis, following the Commission's interpretation of State expense data. States expressed concern over this method, with different States advocating for a greater or lesser proportion of costs directed towards the criminal population. For example, New South Wales stated that:

The current approach of dividing police expenditure evenly into community and specialised policing no longer reflects the drivers of policing services or cost. In New South Wales, activity associated with an offence – i.e. where a person(s) enter the justice chain – only accounts for 6-10 per cent of policing effort. 90-94 per cent is associated with

⁶ State submissions often include significant detail and supporting evidence. In this attachment, the Commission responds to the arguments and evidence States presented in their submissions. For the full detail of State submissions, see the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

prevention, disruption and community engagement, with the aim of minimising costs on the individual and government service delivery. This approach also seeks to ensure the community has strong feelings of safety, which adds to the desirability of communities as places to live and locate businesses. Taking this into account, NSW Treasury recommends that the Commission consider a split between community and specialised police of around 80 and 20 per cent respectively.

Whereas Western Australia argued:

Given the lack of relationship between population size and 'community policing' costs, there is no doubt that the 50:50 split of police expenses between specialised and community policing is incorrect. The vast majority of police expenses relate to crime-related (specialised) policing.

76 The terminology of specialised and community policing has in itself been a source of confusion and disagreement, with Victoria noting:

State police services generally have difficulty in viewing their activities in terms of the Commission's typology of 'community policing' and 'specialised policing'. The Victorian Police consider that their activities can be broadly categorised as reactive or proactive.

77 In the 2020 Review, the Commission has tried to produce a more empirical assessment. Feedback from States was supportive of this attempt though Tasmania cautioned against change to the existing model, noting that the Commission considered the 2015 Review approach as sufficiently reliable. However, most States did express concern over the early attempts of the new approach or reserved the right to make a final opinion once the model was finalised. Given the scope of changes to the model since those early attempts, State concerns regarding the initial proposal have not been considered in detail in this report.

78 If the Commission were to find itself unable to develop a reliable new model, most States were willing to support the continued use of the 2015 Review model. However, as noted above, there remains significant disagreement on how the split between criminal and community expenses should be determined.

79 The policing task assessment in the 2020 Review is based on a regression model which predicts police spending in police districts. The main drivers of police spending were found to be:

- population, including its regional distribution
- levels of criminal activity.

80 These drivers form the basis of the policing task for the Police assessment. For every dollar spent on a person in the general population in a major city, States spend increasing amounts per person in the general population in increasingly more remote areas. Additionally, States spend a further \$20.50 per offender. These cost weights, derived from regression techniques, are:

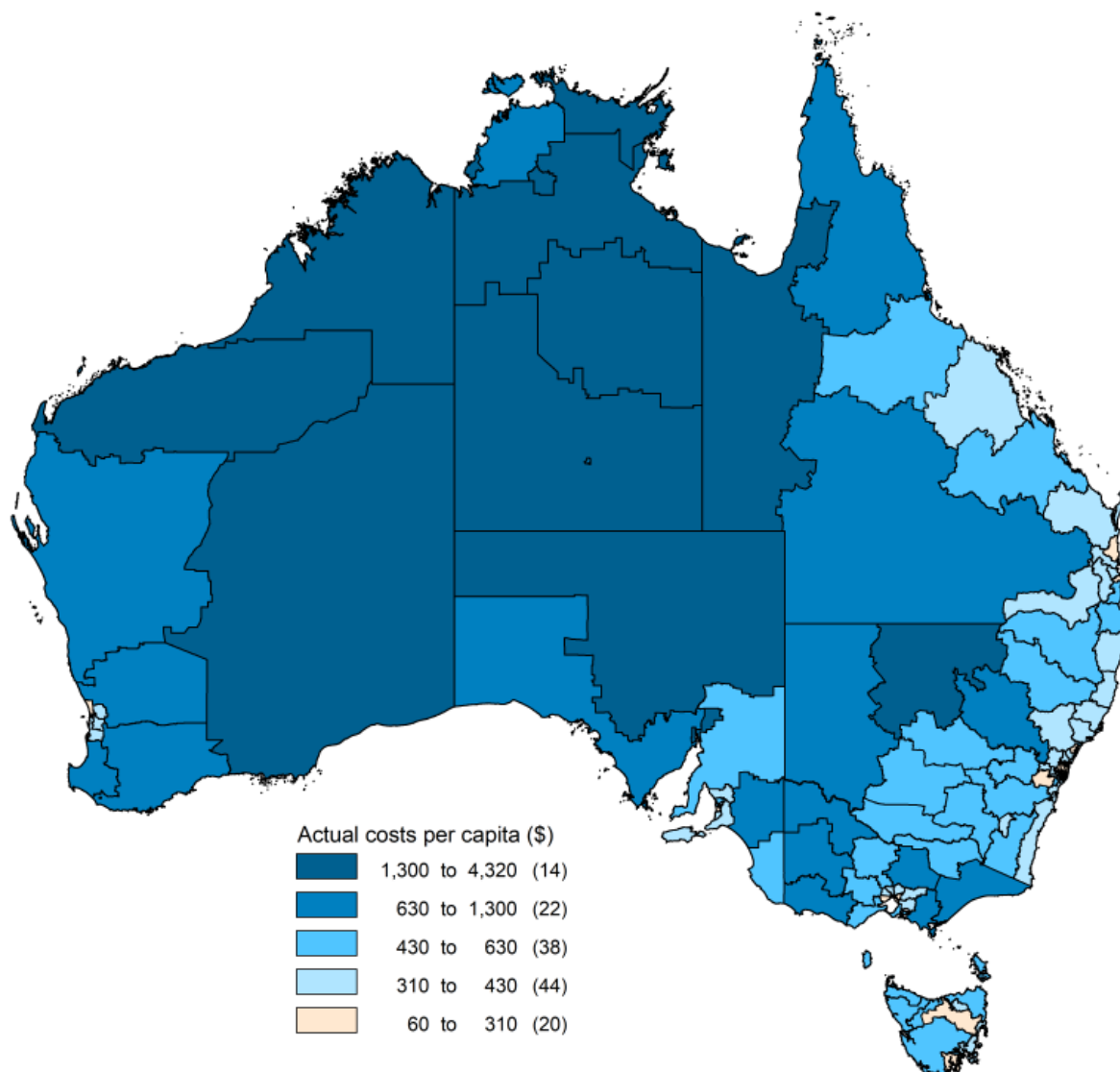
- major cities — 1.0 per person
- inner regional — 1.5 per person
- outer regional — 1.6 per person
- remote — 3.1 per person
- very remote — 9.5 per person
- offenders — 20.5 per offender.

81 The increases in costs with remoteness are significantly greater than seen in other categories. This reflects two features.

- In addition to the increases in costs for similar services with increasing remoteness (usually captured by regional costs in other categories), police provide a more permanent presence in a much wider range of locations compared to other State service delivery staff. During the State visits, several States told the Commission of this role the police provide, such that in some communities the police represent the primary face of government service delivery, thus providing a wider range of services than just policing. In contrast, in major cities and regional centres these roles are usually provided by staff from other agencies.
- While the costs of dealing with offenders could be expected to increase with remoteness, the model adopted assigns all remoteness costs to population, rather than offenders.

82 Data provided by States show that police costs per capita are much higher for remote areas compared to non-remote areas. These data are mapped in Figure 1. This shows that the high costs of policing in remote areas are experienced across the country. All States with remote populations demonstrate significantly higher costs per capita in remote than non-remote areas.

Figure 1 Actual cost per capita by police district, 2015-17



Source: Commission calculation based on State data.

Interpretation

- 83 The 2020 Review policing task model removes the need to apply a judgment-based estimate on the split between community (EPC) driven costs, and specialised (offender driver) costs. It is worth considering how the implicit split in the model differs from the judgment based split of the 2015 Review methods.
- 84 The results of applying the regression to the 2017-18 assessment year (see Table 7) show offender based costs make up 32.5% of the policing task results and regional based population costs make up 67.5%. This share of 67.5% should not be confused with the 50.0% of police costs assumed to be related to population in the 2015 Review, as it also incorporates the impact that geography has on the policing task. It should also not be interpreted as police using 32.5% of their resources to

target offenders and 67.5% for other general work. Rather, 67.5% of spending can be explained on an EPC basis or is correlated with remoteness and 32.5% can be explained by differing levels of crime.

- 85 The difference between these concepts can be seen from a hypothetical example. If States allocated police resources across each State in an EPC manner, police could still spend 100% of their time targeting offenders. One possible outcome of this would be that in low crime areas, less severe crimes may attract more resourcing than they would in high crime areas.

Data concerns

- 86 New South Wales and Queensland raised concerns that using offender data biases results against criminal-related work police do to prevent an offence occurring in the first place. The Commission does not consider that any such bias exists. Police districts with a large number of offenders have higher costs. While some of these costs are directly related to the arresting or other forms of proceeding against those offenders, other costs relate to diversion or other strategies aimed at the same population group but not tied to resolving a particular offence. For example, police may spend significant resources checking on people on parole to discourage parole violations. This spending is not targeted at a particular offence or offender, but areas with high numbers of parolees are likely to have higher numbers of offenders. To the extent to which this is true, this spending will be allocated to offender related costs. That is, to the extent that variation in police spending between districts is correlated with, but not necessarily directly caused by, variation in offender numbers, it will be allocated to offender related spending.
- 87 Traffic and breach of bail offences have been excluded from the calculations. This was done to ensure data were more comparable between States. The Northern Territory expressed reservations that the exclusion of these offences could distort the regional costs gradient. In some States, traffic offences are primarily enforced by police while in other States this is done by road or other authorities, which do not contribute to police costs or offence numbers. These, and other differences, make traffic and breach of bail offences not comparable between States. The Commission understands that these offences tend to require fewer resources than other types of crime. As such, excluding these offences results in a more reliable model for predicting police expenses than including them.

Alternative models

- 88 New South Wales argued that, conceptually, the level of remoteness should affect the cost associated with offenders as well as the costs associated with the general population. While conceptually this approach is valid, analysis using such an approach did not bear this out. The Commission's view is that any increase in costs in dealing

with offenders is better explained through the relationship between remoteness and population, rather than between remoteness and offender numbers.

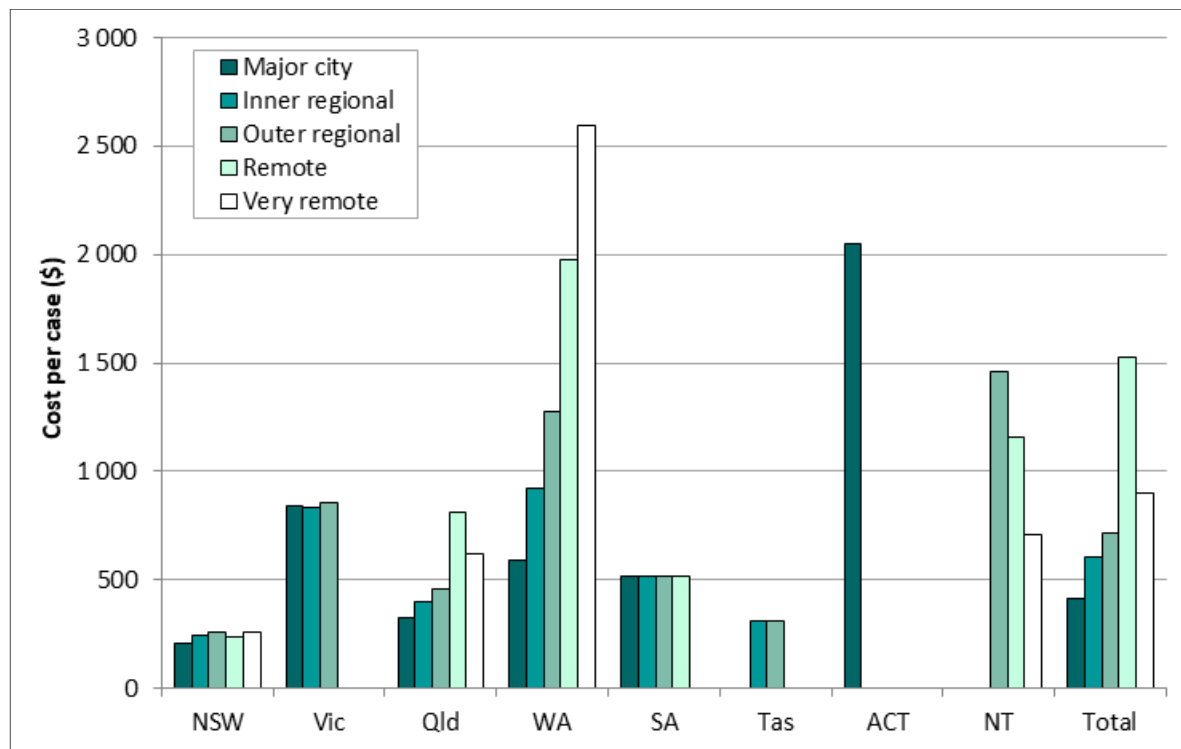
Regional costs

- 89 In the 2015 Review, police and school expense data were used to derive a regional costs factor for courts and prisons as well as a number of other assessments. Most States support the continued application of regional costs to these assessments. However, only South Australia and the ACT supported retaining the 2015 Review method whereas Victoria, Tasmania, Western Australia and New South Wales supported the use of regional costs conditional on the final method of calculation.
- 90 The Commission has decided the 2015 Review method for assessing regional costs is no longer appropriate. Whereas the regional costs gradient applied in the previous review reflected the increased costs of providing the same types of services with increasing remoteness, the regional costs gradient from the model used in this Review also, in part, captures the effects of the additional duties performed by police in the more remote regions. Therefore, it is not appropriate to apply this gradient to other areas of service delivery, even within the Justice category. Instead, information on regional costs data regarding courts and prisons have been sourced directly from States.

Court regional costs

- 91 Figure 2 and Figure 3 show the cost per court case in different regions and different States.
- 92 Most States have been unable to meaningfully attribute costs to different districts, and have therefore assumed costs are proportional to the number of cases.
- 93 In addition, the cost per case varies significantly between States, making national average patterns difficult to interpret. For example, the very high cost of justice in the ACT is not necessarily sufficient evidence to demonstrate that all major cities are expensive.

Figure 2 Cost per civil court case, Magistrate’s (local) court, 2016-17



Source: State treasuries.

Figure 3 Cost per criminal court case, Magistrate’s (local) court, 2016-17



Source: State treasuries.

94 The relatively complex pattern evident across States is likely to reflect a combination of a number of factors. As well as the common regional costs and service delivery scale phenomenon, the standard of service provided in a more remote or isolated area may differ because:

- more complex cases are likely to be heard in major cities, or large towns, regardless of where the crime occurred
- there is some evidence that the nature of the service provided, and the time spent per case, is lower in remote courts.⁷

95 In considering a regional costs gradient for courts it is also important to consider that the regional profile of the assessed defendant population is not necessarily a good proxy for the distribution of courts, as shown in Table 14, and considered in more detail in Attachment 25 — Geography.

Table 14 Remoteness of residence by court remoteness, lower court defendants, Victoria, 2014-15

Remoteness of defendant's residence	Remoteness of court hearing				Total
	Major cities	Inner regional	Outer regional	Remote	
	%	%	%	%	%
Major cities	95.8	3.6	0.6	0.0	100.0
Inner regional	48.2	47.7	4.0	0.0	100.0
Outer regional	16.2	36.1	46.6	1.2	100.0
Remote	66.5	15.1	17.4	1.1	100.0

Source: Victorian Treasury.

96 Given the complex interactions of forces acting upon the relative costs of court services, and the difficulty in measuring these forces reliably, the Commission has decided to apply judgment and intends to consider that providing criminal and civil court services to residents from remote and very remote areas incurs an additional 10% higher cost than for residents from other regions.

97 This takes into account:

- the relative costs of court services in different regions
- the standard of service provided in different areas
- the propensity of residents to travel to non-remote areas to attend court
- that Magistrates' courts represent about half of all court costs, and higher courts rarely travel to remote areas.

⁷ Australian Broadcasting Corporation (ABC), '[What if your day in court lasted just five minutes?](https://www.abc.net.au/radionational/programs/backgroundbriefing/what-if-your-day-in-court-lived-just-five-minutes-v1/10813042#transcript)', Background Briefing, 17 February 2019, (<https://www.abc.net.au/radionational/programs/backgroundbriefing/what-if-your-day-in-court-lived-just-five-minutes-v1/10813042#transcript>), [accessed 04/06/19].

Prison regional costs

- 98 The Commission has undertaken regression analysis of prison costs and found that after controlling for the proportion of maximum security prisoners, there is a significant fixed cost to running prisons. Small prisons are more expensive per prisoner than large prisons. Prisons in non-remote areas contain, on average, four times as many prisoners as prisons in remote areas. Given the fixed and variable costs, States spend about 29% more per prisoner in remote prisons than those in major city prisons.
- 99 However, only about 40% of remote residents who go to prison end up in a remote prison. While 8.6% of assessed prisoners originate in remote areas, only 3.4% of prisoners are in remote prisons.
- 100 For practicality reasons, the Commission has distributed the additional service delivery scale and regional costs expenses of the 3.4% of actual prisoners in remote areas amongst the 8.6% of prisoners who originate from remote areas. Allocating the costs in this way leads to prisoners assessed to originate from remote areas being 9% more expensive than prisoners assessed to originate from non-remote areas.

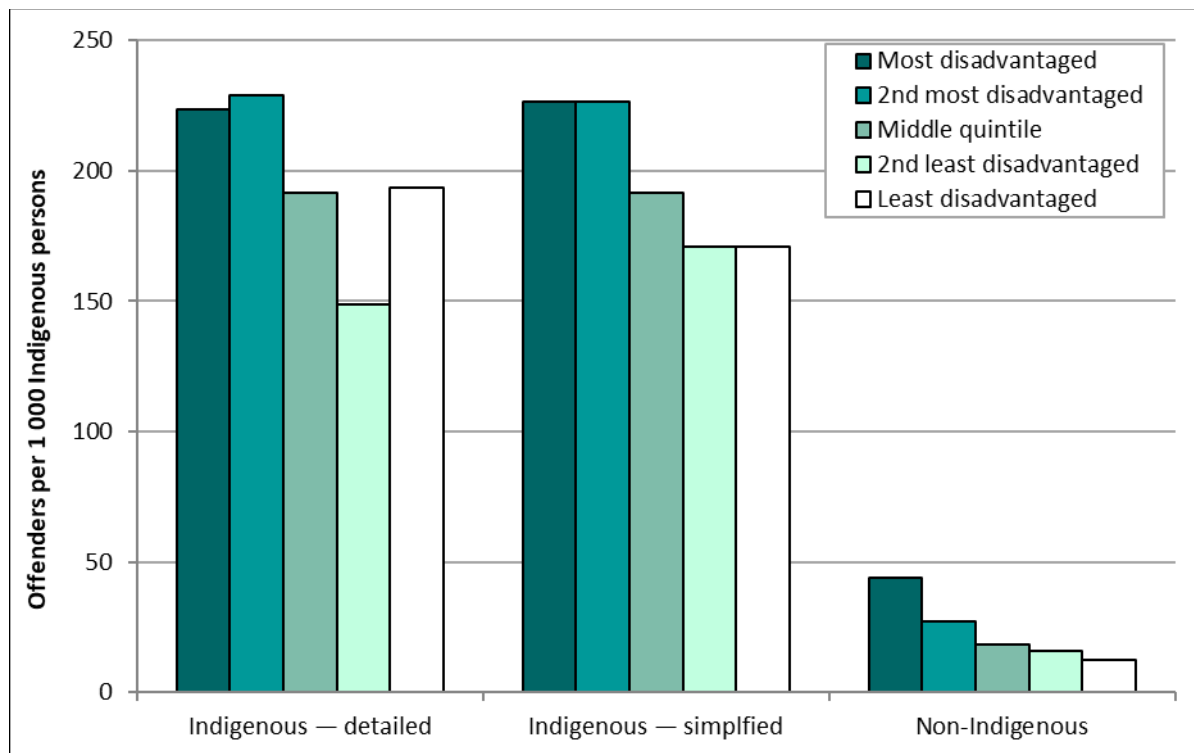
Socio-economic profiles

Socio-demographic assessment of offenders (Police)

Indigenous status and SES

- 101 The rate of offenders in the Indigenous population is eight times that of the non-Indigenous population. Therefore, Indigeneity is an important factor to consider when assessing disabilities related to the number of offenders.
- 102 While generally, offender rates for Indigenous people decrease with decreasing disadvantage, the available data did not identify a uniform decrease in offender rates, as shown in Figure 4. Instead, a simplified three-group set of Indigenous SES groups (IRSEO) appears to assess the SES of the Indigenous population as accurately as the available data will allow.
- 103 For the non-Indigenous population, a clear relationship of decreasing offender rates with decreasing disadvantage is observable. As such the Commission is using five non-Indigenous SEIFA (NISEIFA) quintiles to assess the non-Indigenous offending population to capture the effect of SES on offender rates.

Figure 4 Offence rates by SES, average of 2015-16 and 2016-17



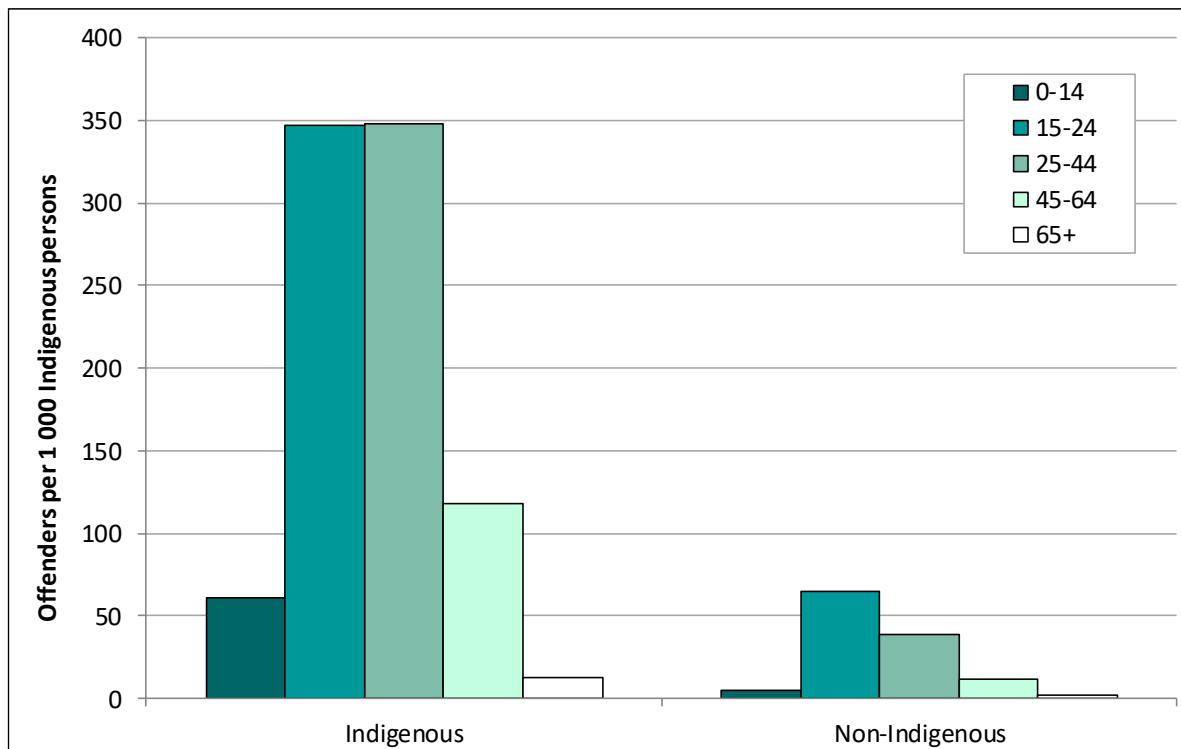
Source: Commission calculation based on State provided data.

Age

104 The offender rate varies significantly by age, with 15-44 year olds having considerably higher offender rates than other age groups as shown in Figure 5, with very low rates for the 0-14 and 65+ age groups.⁸

⁸ In contrast to the 2015 approach when 0-14 and 65+ age groups were assumed to have zero use of justice services, in this review the Commission considers it simpler and more appropriate to use the actual offence rates of these groups.

Figure 5 Offence rates by age and Indigenous status, average of 2015-16 and 2016-17

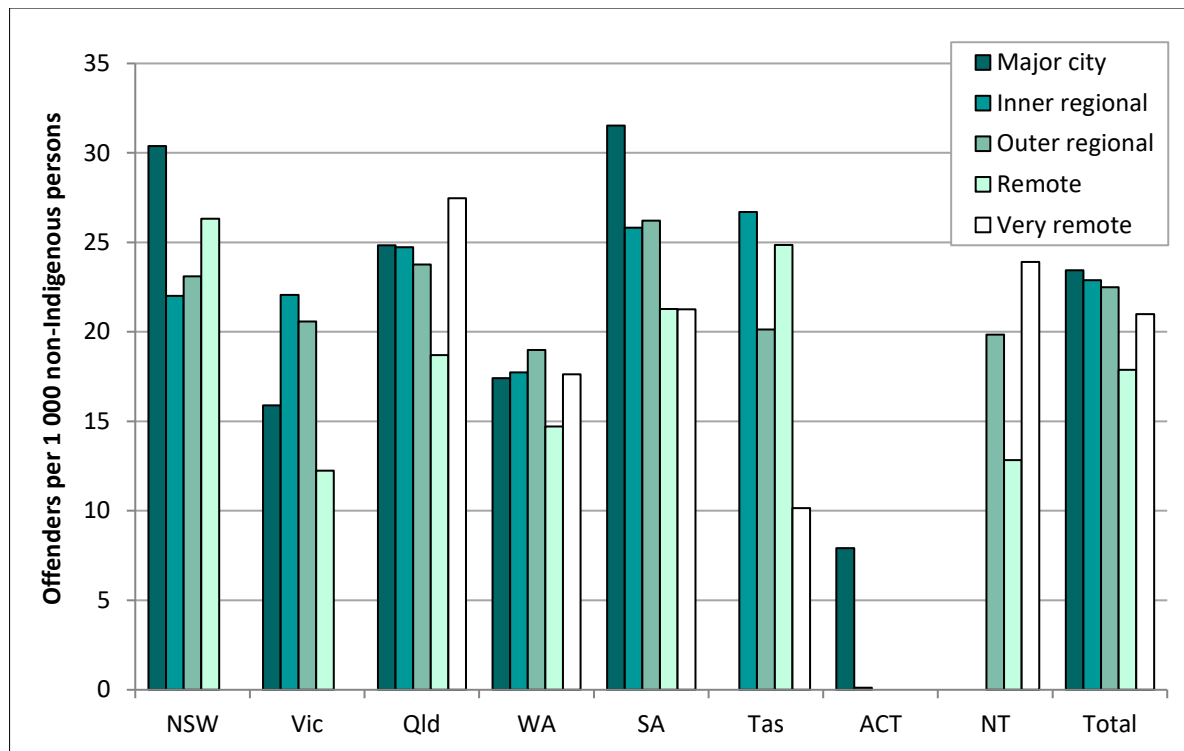


Source: Commission calculation based on State provided data.

Remote service use

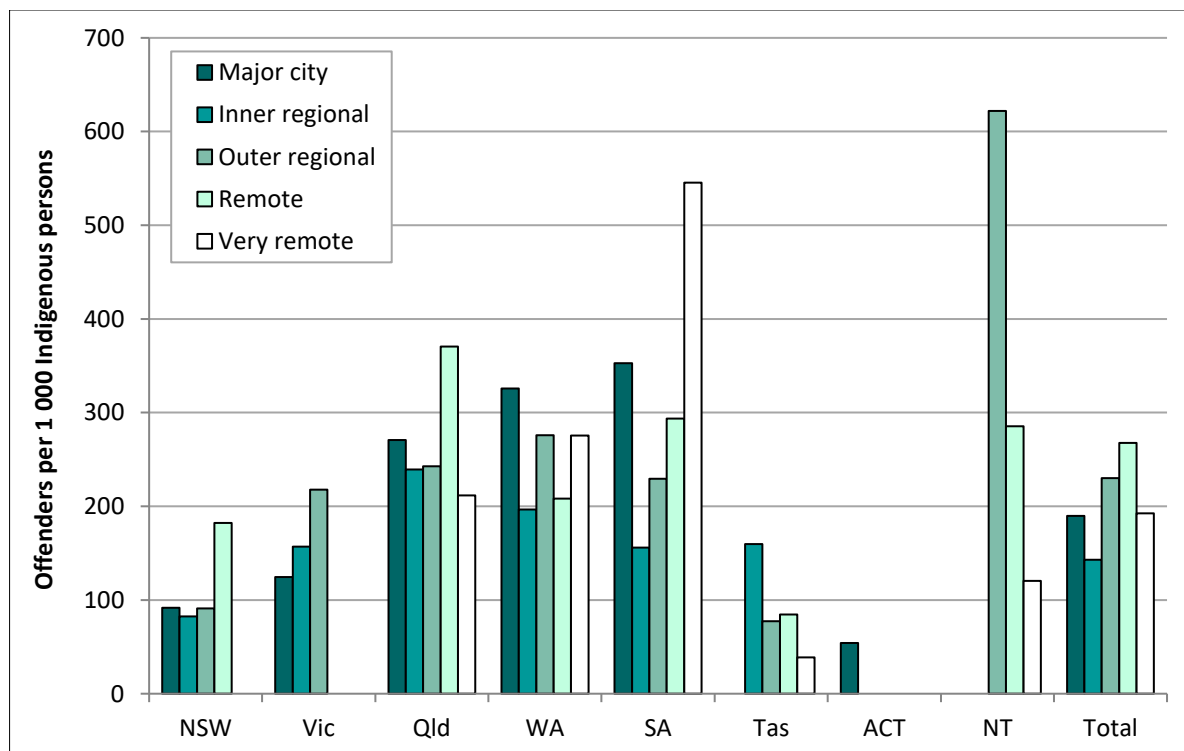
105 There is no clear or consistent relation between remoteness and offender rates, as shown in Figure 6 and Figure 7. For the Indigenous population, even at the national level, it is not clear whether offender rates increase or decrease with remoteness. For the non-Indigenous population, there is some support in the data that remote areas probably have marginally lower offender rates than non-remote areas, although this pattern is far from clear or consistent across the country. In the absence of compelling evidence that offender rates vary with remoteness, remoteness has not been used in the SDC profile.

Figure 6 Non-Indigenous offence rates by remoteness, average of 2015-16 and 2016-17



Source: Commission calculation based on State provided data.

Figure 7 Indigenous offence rates by remoteness, average of 2015-16 and 2016-17



Source: Commission calculation based on State provided data.

Socio-demographic assessment of defendants (criminal courts)

106 Data on the SDC profile of defendants include only New South Wales, Queensland, Western Australia, South Australia, and Northern Territory as other States were unable to provide Indigenous status for their defendants.

Indigenous status

107 The Indigenous rate of defendants is much higher than that of the non-Indigenous population in all States, ranging from 3.9 times the rate in New South Wales to 8.9 in Western Australia, with an average of 4.8 across the five States.

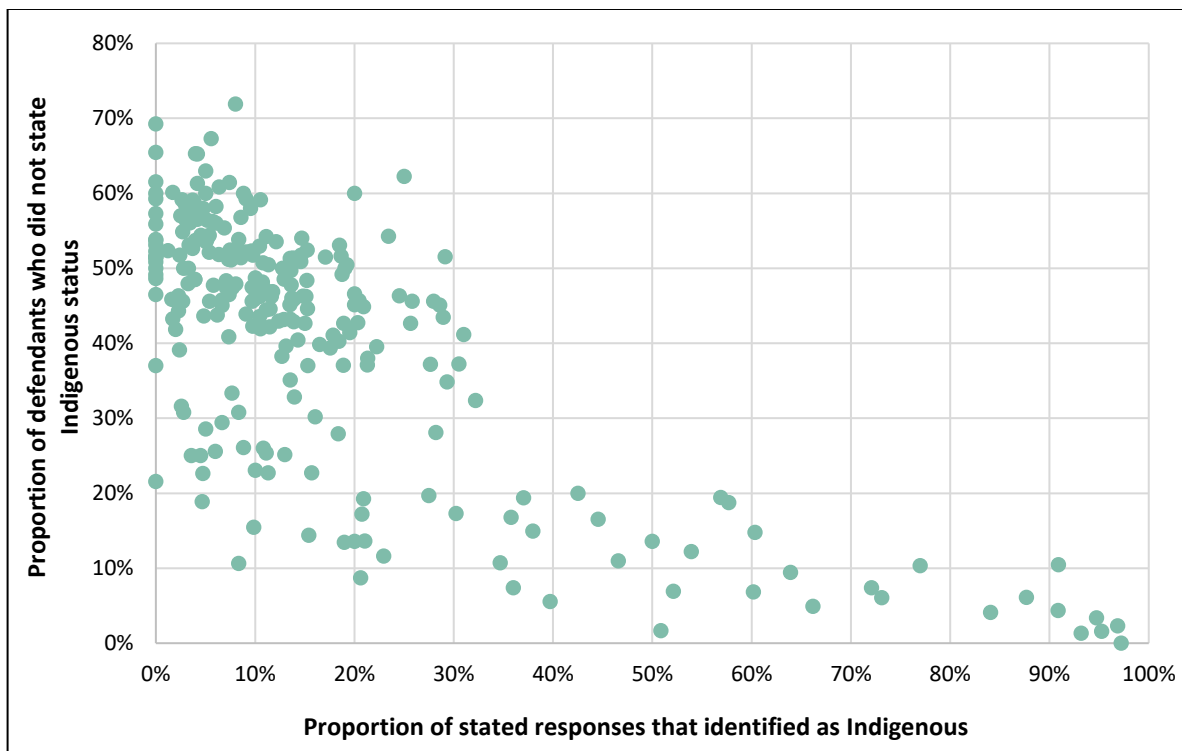
108 ***Treatment of Indigenous status non-response.*** State provided data include 12% of defendants as having an Indigenous status of 'not stated'. This is primarily because Indigenous status is not routinely collected for traffic offences.⁹

109 Traffic defendant data provided by Western Australia shows 60% provided an Indigenous status, with 40% not stated. Figure 8 shows that suburbs with a smaller proportion of Indigenous defendants based on responding persons (x axis) tend to have more defendants not stating their Indigenous status (y axis) at all.

110 If in these cases the vast majority of actual Indigenous defendants have been identified, then this result suggests that the proportion of the not stated population who are Indigenous is most likely to be significantly less than the proportion of the stated population. On this basis, the Commission intends to allocate the Indigeneity of not stated defendants in proportion to the Indigenous share of the total population.

⁹ Traffic incidents account for some 40% of court attendances. Excluding traffic incidents could result in distorted national averages by Indigenous status.

Figure 8 Western Australian defendants: Indigenous status by suburb



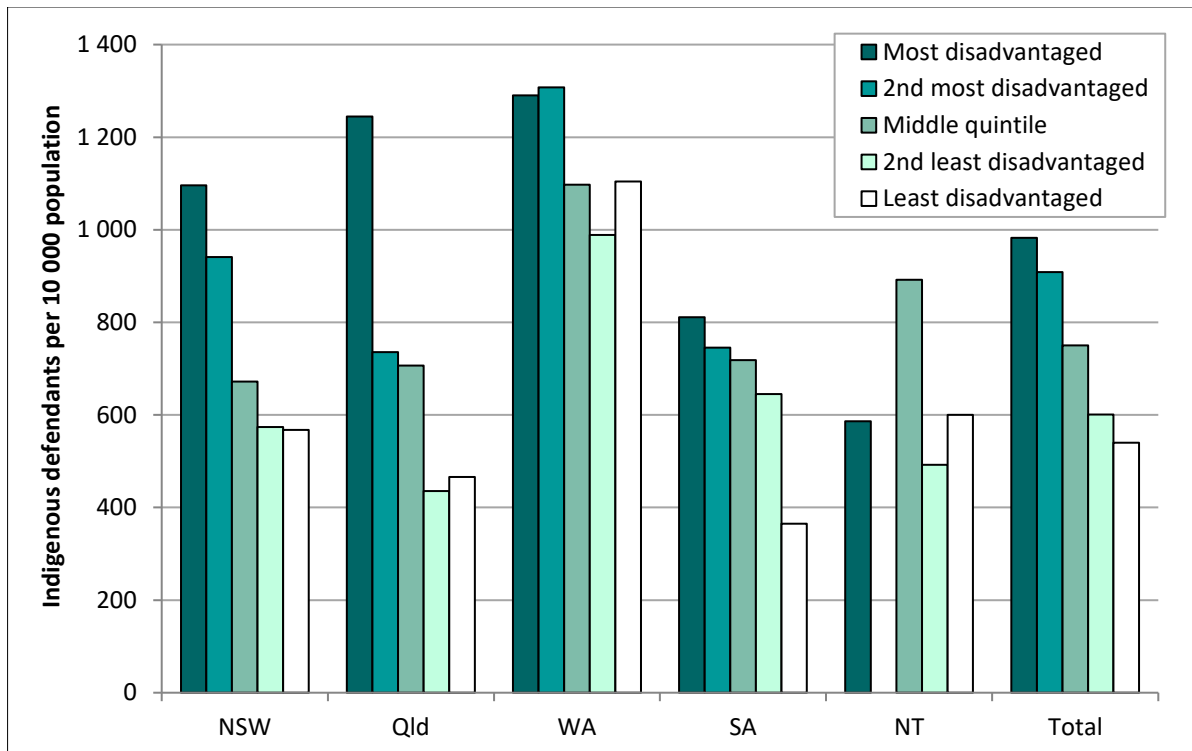
Source: Commission analysis of Western Australian Treasury data.

111 This conclusion is not generalised to other areas. The Commission extrapolates on the basis of stated responses unless there is strong evidence for an alternative.

Socio-economic status

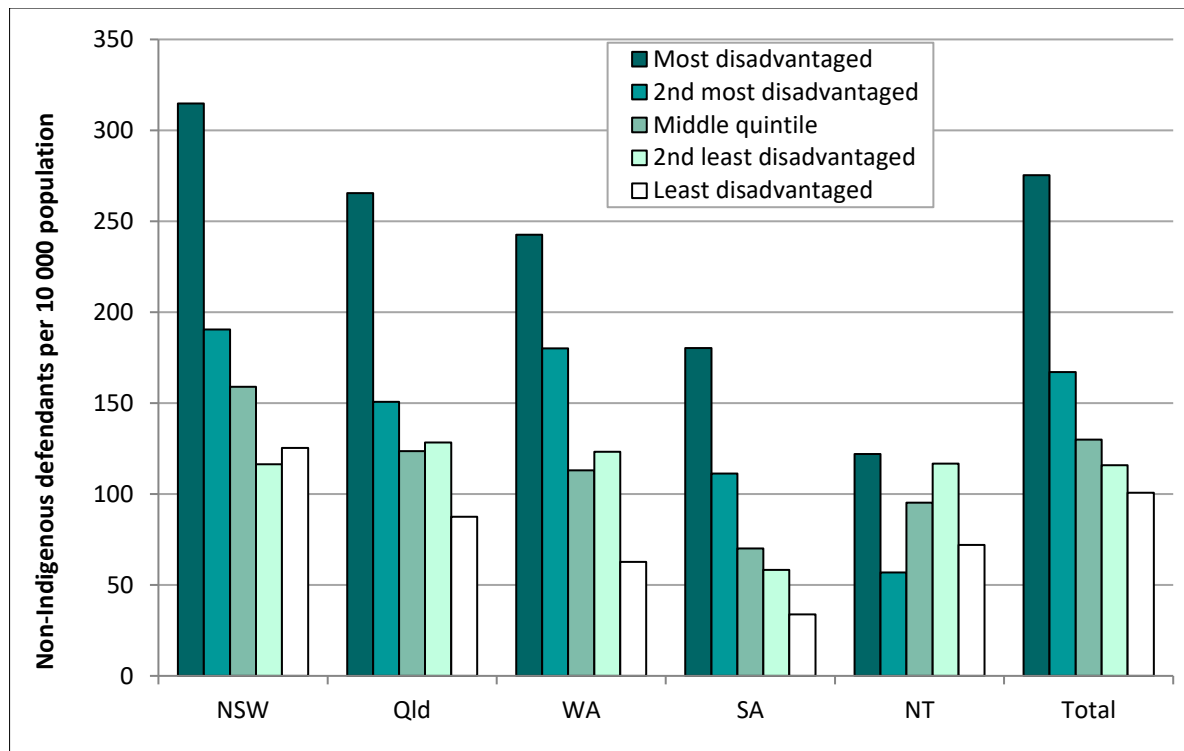
112 Defendant rates increase amongst lower SES populations as shown in Figure 9 and Figure 10. Staff propose to use five SES quintiles for both the Indigenous and non-Indigenous populations. IRSEO will be the SES measurement for the Indigenous population and NISEFIA will be used for the non-Indigenous population.

Figure 9 Indigenous defendant rates by SES (IRSEO), 2015-16 and 2016-17 average



Source: Commission calculation based on State provided data.

Figure 10 Non-Indigenous defendant rates by SES (NISEIFA), 2015-16 and 2016-17 average

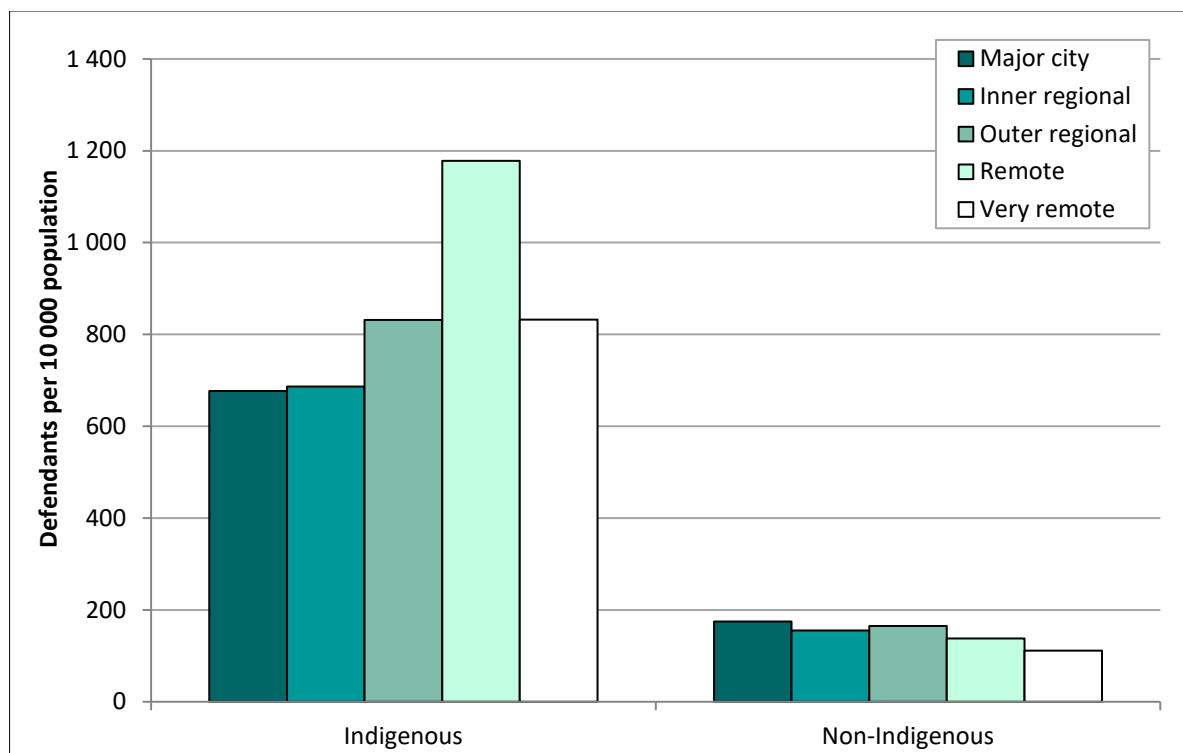


Source: Commission calculation based on State provided data.

Remote service use

113 No clear relationship was established between the rate of defendants and their remoteness location as shown in Figure 11. Therefore remoteness has not been used as a factor in assessing the number of defendants.

Figure 11 Defendant rate by remoteness, average of 2015-16 and 2016-17



Note: Total data include NSW, Qld, WA, SA and NT only.
 Source: Commission calculation based on State provided data.

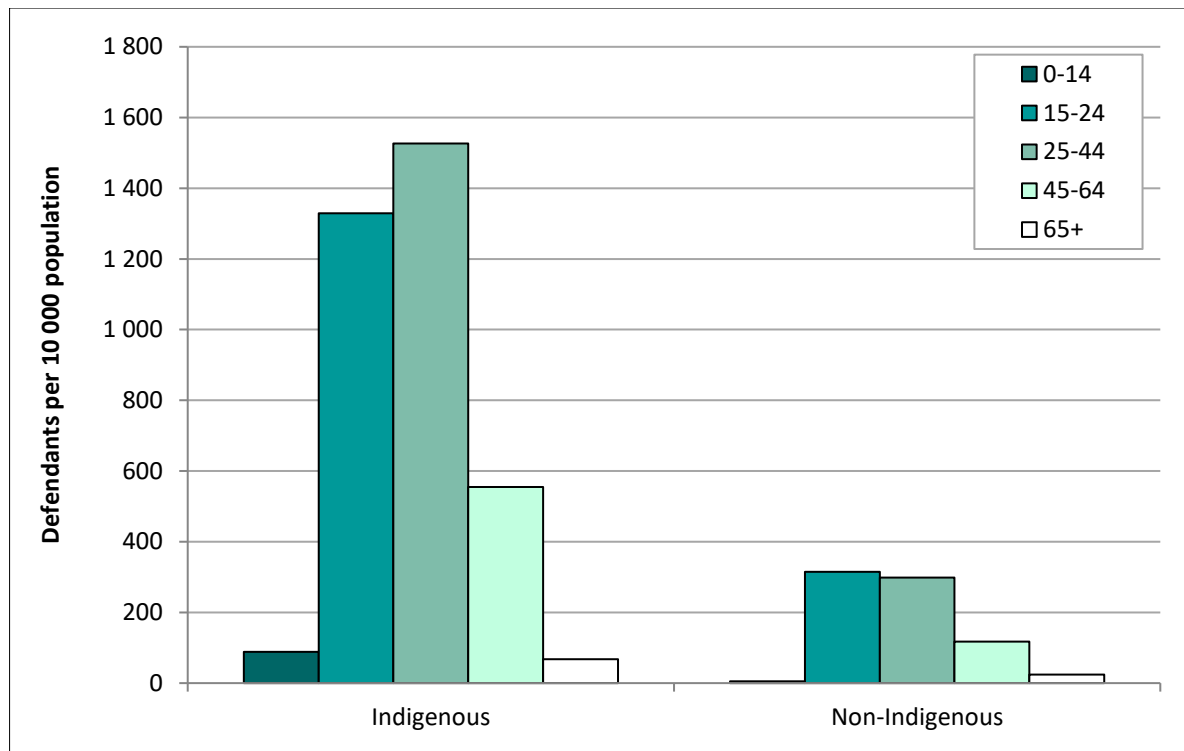
Age

114 Defendant rates are particularly high among 15-44 year olds, as shown in Figure 12. There are also different age profiles between the Indigenous and non-Indigenous population. Generally Indigenous defendant rates are 5 to 7 times that of the non-Indigenous population. However for youth under 15 they are 15 to 20 times. These differing age profiles will be reflected when assessing the number of defendants in each State.

115 As data are available, in this review the Commission intends to use the actual defendant rates for the 0-14 and 65+ age groups, in contrast to the 2015 approach when zero rates were applied to these age groups.¹⁰

¹⁰ In contrast to the 2015 Review approach when 0-14 and 65+ age groups were assumed to have zero use of Justice Services, in this review the Commission considers it simpler and more appropriate to use the actual offence rates of these groups.

Figure 12 Defendant rates by age and Indigenous status, average of 2015-16 and 2016-17



Note: Data include NSW, Qld, WA, SA and NT only.
 Source: Commission calculation based on State provided data.

Socio-economic assessment of prisoners (Prisons)

Indigenous status and socio-economic status

- 116 In 2018 Indigenous people were, on average, 15 times more likely to be in prison than non-Indigenous people. Indigenous status is accordingly included as a disability when assessing prisoner numbers.
- 117 It is not possible to measure directly an SES disability for prisoners, as SES data are not available for prisoners. Therefore the Commission intends to use defendant SES data as a proxy for prisoner SES rates.
- 118 The ACT argued that as the police regional costs factor applied to the courts and prison assessments was discounted by 25% in the 2015 Review, for consistency, the defendants SES data used as a proxy for prison SES should also be discounted by 25%.
- 119 Both Indigenous and low SES people are over represented in the justice system, and Indigenous people are more over-represented in the prison system than in the criminal court system. It seems likely that prisons may also have a greater over-representation of other disadvantaged groups, such as low SES. The Commission considered a mark-up of this disability, rather than a discount, but the level of

mark-up could not be reliably measured, and likely values for such a mark-up would not be material.

Remote service use

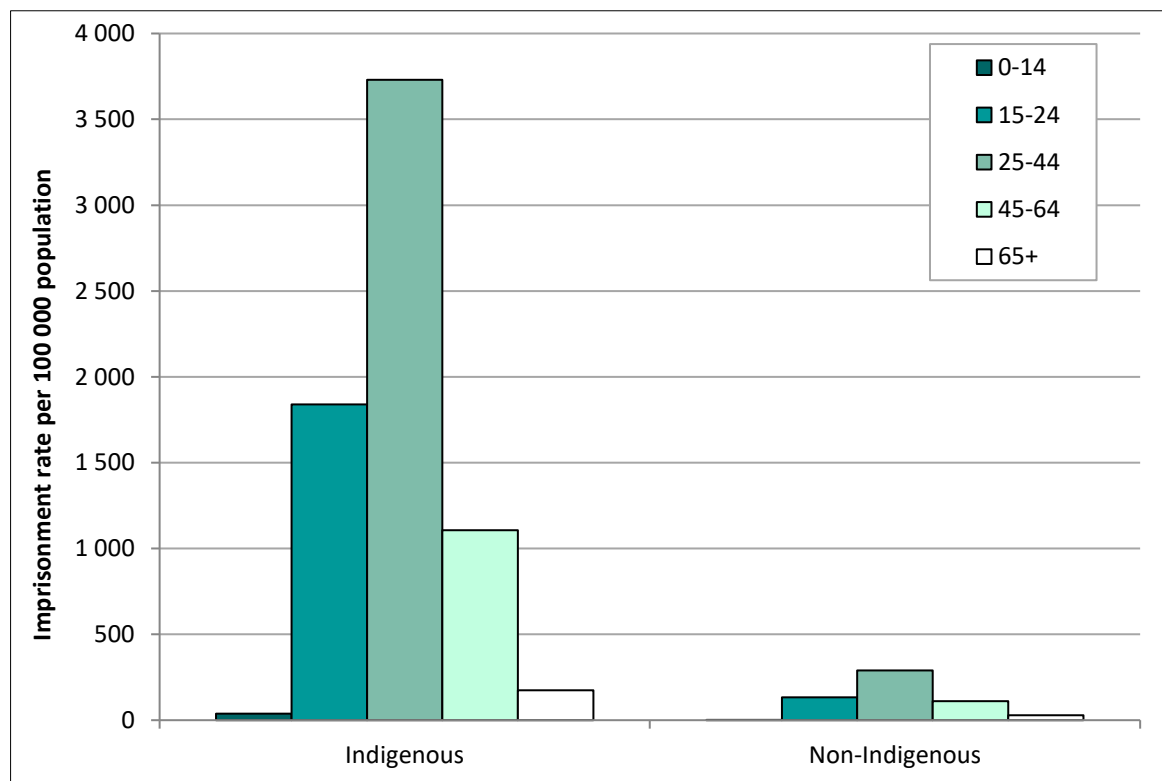
120 There are no available data on place of residence of the imprisoned population prior to their imprisonment, and therefore ability to ascertain a relationship between remoteness and imprisonment rates. Additionally, in the absence of a clear relationship between remoteness and rates of crime for offenders or defendants there is no basis to assume any relationship.

Age

121 Figure 13 shows the number of prisoners in Australia by age and Indigenous status, including those in juvenile detention. The data show imprisonment rates are highest for people age 25-44 than for other age groups. These age profiles will be reflected when assessing the number of prisoners.

122 In contrast to the 2015 approach when 0-14 and 65+ age groups were assumed to have zero use of justice services, in this review the Commission considers it simpler and more appropriate to use the actual imprisonment rates of these groups.

Figure 13 Imprisonment rates by age and Indigenous status, 2017-18



Source: Commission calculation based on ABS, 2018, *Prisoners in Australia*, cat. no. 4517.0, Table 21.

OTHER ISSUES CONSIDERED BY THE COMMISSION

123 There were a number of other issues considered by the Commission, largely in response to concerns raised by States. These issues related to the method for measuring existing disabilities or requests for new disabilities that were not included in the 2015 Review assessment. The main reasons for not assessing certain disabilities identified by States are:

- the conceptual case for a disability has not been established
- an assessment would not be material, that is, redistribute more than \$35 per capita for any State¹¹
- data are not available to make a reliable assessment.

Major city effects

124 New South Wales identified three areas where it sought to have disabilities recognised. It argued that Sydney's status as Australia's most globalised city and largest financial hub makes it a target for terrorism as well as complex crime, especially organised crime and cyber-crime. It also houses a disproportionate number of federal prisoners.

125 New South Wales argued it is the State most exposed to threats of terrorism and there are material costs associated with providing the necessary infrastructure and intelligence across police, courts and corrections to combat terrorism threats.

126 The Commission considers that New South Wales needs to provide an above average level of service in providing counter-terrorism services, but that such a case might be made for the other States with large cities, such as Victoria and perhaps Queensland, as well as arguably by the ACT due to the co-location of national government institutions.

127 Expense data recently provided by New South Wales showed their Investigation and Counter Terrorism unit within the New South Wales Police spent an average of \$226 million per year in 2015-16 and 2016-17. Even if all work in this cost centre was dedicated to counter-terrorism and no other State had any counter-terrorism related needs, this would only redistribute \$29 per capita, which is not material.

128 In the absence of reliable data on the relative risk of terrorism between States and on expenditure regarding counter-terrorism activities, the Commission cannot make an assessment. The available evidence indicates that even if an assessment could be made it is unlikely to be material.

¹¹ The Commission has set a materiality threshold for including a disability. The materiality test applies to the total impact the disability has on the redistribution across all revenue or expense categories in which it is assessed. To be included, a disability assessment must redistribute more than \$35 per capita away from an EPC assessment for any State.

- 129 Likewise, the Commission has no way of ascertaining what constitutes a complex crime and measuring it accordingly. For example, two crimes recorded under the same offence classification may use vastly different resources to collect evidence and identify the offender, depending on the particulars of the crime. With increasing complexity of crime there is also the likelihood of no offender being proceeded against, thereby creating a bias in recorded data towards crimes that are simpler to solve.
- 130 While the presence of cyber-crime and organised crime units in a police force may be an indication of the presence of complex crime, most States have at least some level of resource dedicated to these functions and, following the logic in paragraph 127, it appears unlikely that this would be material, even after aggregating these different drivers for more complex policing.
- 131 In regards to corrections, federal prisoners nationally represent only 2.5% of total prisoners. ABS data suggest that New South Wales has about 50% more federal prisoners per capita than the national average. Assuming federal prisoners cost the same as other prisoners, and that the Commonwealth contributes no funding, but excluding impacts on court expenses, an assessment would redistribute about \$2 per capita towards New South Wales.
- 132 Other than on federal prisoners, there is no reliable assessment of the relative impacts that these factors have on different States, or the amount of money involved. However, it appears very unlikely that any assessment would be material.

Border patrol

- 133 Queensland is concerned that not all service delivery challenges are captured in the current or proposed model, in particular the additional border patrol duties required in the Torres Strait. Western Australia expressed similar concerns regarding the length of coastline it is required to police. Queensland argued for the Commission to investigate border protection requirements and costs involved in meeting these obligations.
- 134 Police costs data provided by Queensland allocate less than \$3 million to aircraft and boat expenses in Far North Queensland. The costs of providing aircraft and boat expenses in Far North Queensland, or any other similar costs, are part of the expenses that are used to measure the effect that remote populations have on policing costs. This would only be incomplete if the very remote parts of any particular State are more expensive to police than very remote parts of other States. This issue is considered in Attachment 25 — Geography, but it does not identify any reliable approach upon which to develop an alternative assessment.

Cross-border

- 135 The ACT argued that it provides cross-border policing services to other States, particularly New South Wales.
- 136 Data provided by the States, as seen in Table 15, shows fewer New South Wales residents committed offences or are defendants in the ACT than the number of ACT residents offending or are defendants in New South Wales. Therefore the Commission has concluded that there is no case for a cross-border assessment.

Table 15 Cross-border proceedings and defendants, New South Wales and ACT

	2015-16	2016-17
	No.	No.
Count of proceedings		
NSW residents offending in the ACT, excl breach of bail and traffic	244	238
NSW residents offending in the ACT, all offences	458	443
ACT residents offending in NSW, excl breach of bail and traffic	686	658
Count of defendants		
NSW residents appearing as defendants in the ACT	624	681
ACT residents appearing as defendants in NSW	863	744

Source: New South Wales Treasury and ACT Treasury.

Split of lower and higher courts

- 137 Victoria suggested that higher and lower courts could be assessed separately to account for the differing Indigenous profiles.
- 138 Table 16 shows that the proportion of defendants who do not state (or are not asked) their Indigeneity is very high in the lower courts. Using the approach described in paragraphs 108-110, to distribute non-response on an ERP basis, there is very little difference in the Indigeneity profile of higher and lower courts, and differentiation is not material.

Table 16 Indigenous status response, selected States, 2016-17

	Indigenous	Non-Indigenous	Not stated	Total
	%	%	%	'000
Higher courts	15	78	7	12
Lower courts				
Traffic offences	—	—	100	138
Other offences	21	71	7	223
Total lower courts	13	44	43	361
Total courts	13	45	42	374

Note: Data from New South Wales, Queensland, South Australia and the Northern Territory.

Source: ABS, 2016-17, *Criminal Courts*, cat. no. 4513.0.

Culturally and linguistically diverse prisoners

- 139 New South Wales asked the Commission to cease the cost loading for the Indigenous population, providing evidence that prisoner costs are not materially different for Indigenous and non-Indigenous inmates. This is consistent with the Commission's approach in the 2015 Review, whereby no cost weight was attached to Indigenous prisoners. Similarly, none is proposed for the 2020 Review. Rather, Indigenous status is used as an SDC characteristic in making an assessment on the total number of prisoners for a State, but the cost per prisoner is assumed to be the same.
- 140 New South Wales also argued that it has a higher than average culturally and linguistically diverse (CALD) population and this adds a layer of complexity and cost to the provision of corrective and other justice services.
- 141 There are difficulties in collecting information that both define a CALD prisoner and a relative cost weight. The only known CALD information on prisoners is country of birth.¹² The Commission considers being born overseas is not an adequate way to define the CALD population, as many people born overseas have good English and do not require an interpreter. Likewise, there are many people born in Australia, particularly the Indigenous population in the Northern Territory, who require additional resources due to cultural and linguistic difficulties.
- 142 Additionally, the Commission would need access to detailed prisoner cost information to determine any cost weight.
- 143 The data indicate that those born in a non-main English speaking country offend at a rate that is lower than the non-Indigenous Australian born population.¹³ This lower use rate will most likely offset, to some degree, any additional cost of CALD prisoners. This offsetting of lower use and higher cost is comparable to that seen in other services, such as hospitals.

Separate assessment of non-custodial corrective services

- 144 Non-custodial corrective service recipients, such as those undergoing parole or community service orders, have a different SDC profile from prisoners, and represent about 63% of people in the corrective services system, but only 15% of total corrective service costs. Queensland and Victoria recommended a different assessment of the two groups, rather than using the prison population profile for both.

¹² ABS, 2016, *Prisoners in Australia*, cat. no. 4517.0.

¹³ Non-main English speaking includes all countries with the exception of United Kingdom, Ireland, South Africa, Canada, United States, New Zealand and Australia.

- 145 The Commission used ABS published data¹⁴ to determine the age and Indigenous profile of the non-custodial population. The same SES weights (based on defendant data) were used as there is no other practical alternative. Productivity Commission data¹⁵ were used to determine the proportional split of custodial and non-custodial operating expenses.
- 146 A split assessment would redistribute \$27 per capita less to the Northern Territory, which is not material. To be material, with the current SDC profiles, non-custodial expenses would need to be 19% of the cost of corrective services. However, in the last six years non-custodial expenses have steadily decreased from 16.8% to 14.6%. Alternatively, increasing differentiation of the SDC profiles, particularly Indigenous status, would be a reason to revisit this issue in the future.

Illicit drug consumption as a driver of crime

- 147 Western Australia asked for community drug consumption, specifically methamphetamine, to be included as an additional disability as a driver of crime. It said it has some of the highest methamphetamine consumption in the country which is implicated in increasing family violence cases. Additionally, Western Australia suggested that this high consumption is related to under-resourced Commonwealth surveillance that enables the supply of methamphetamine to enter the State and influences costs related to detection.
- 148 The Commission has not made an adjustment for this because, while Western Australia has methamphetamine use above the national average, it is not clear:
- that given methamphetamine prices in Western Australia are very similar to that of other States,¹⁶ supply and access to methamphetamine is different from other States
 - whether policy differences between States have contributed to the consumption of methamphetamine
 - the extent to which the socio-demographic profile used in the assessment captures differences in methamphetamine use
 - whether other States face similar issues with other drugs.
- 149 In addition to this, Western Australia has budgeted \$171 million over four years for the Methamphetamine Action Plan, a cost of about \$16 per capita per year. Based on those numbers it is unlikely that Western Australia faces materially higher costs than other States.

¹⁴ ABS, 2017 and 2018, *Corrective Services, Australia*, cat. no. 4512.0, Table 4.

¹⁵ Productivity Commission, *Report on Government Services 2018*, Table A.2.

¹⁶ Australian Criminal Intelligence Commission, *Illicit Drug Data Report 2016-17*, p. 152.

REDISTRIBUTION FROM AN EPC ASSESSMENT

150 Table 17 shows the extent to which the assessment for this category differs from an EPC assessment of Justice expenses. States with a positive redistribution are assessed to have above average spending requirements and States with a negative redistribution are assessed to have below average spending requirements. In per capita terms, the largest negative redistributions affect the ACT followed by Victoria and the largest positive redistribution is the Northern Territory.

Table 17 **Redistribution from an EPC assessment, Justice, 2017-18**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	-164	-585	236	126	-22	56	-58	411	830
\$ per capita	-21	-92	48	49	-13	106	-139	1 667	33

Note: The redistribution is the difference from an EPC assessment of category expenses.

Source: Commission calculation.

151 Table 18 shows that the main reasons for the redistributions for each State are that New South Wales, Victoria and the ACT have below average shares of population groups who attract more attention from justice services, especially Indigenous people. They also have below average shares of people in remote areas where policing costs are most expensive. The other States generally have an above average share of these population groups.

Table 18 **Major reasons for the redistribution, Justice, 2017-18**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
SDC	-23	-418	170	43	13	27	-56	244	497
Regional costs	-172	-177	88	97	7	46	-23	134	372
Wage costs	42	21	-18	-16	-40	-14	19	7	89
National capital	-2	-2	-2	-1	-1	0	8	0	8
Total	-164	-585	236	126	-22	56	-58	411	830

Note: The redistributions from an EPC assessment are illustrative. Disabilities may not sum to total due to interactions between the factors.

Source: Commission calculation.

UPDATING THE ASSESSMENT

152 As required by the terms of reference, the assessment will incorporate the latest available data in each annual update. This will allow the assessment to reflect changes in State circumstances.

- The Commission will update the following data annually:
 - prisoner data sourced from the ABS Prison Census

- juvenile detention data sourced from AIHW
- estimated resident population data sourced from the ABS.
- Some of the assessment data are not readily available on an annual basis, or remain stable over time. The Commission will not be updating these data during the review period:
 - offender data used in the police assessment
 - police cost data used in the police assessment
 - defendant data used in the criminal court and prison assessment
 - expense data to determine the GFS split of Criminal courts and Other legal services.

OUTSTANDING ISSUES

153 From the Commission’s perspective, there are no outstanding issues for this assessment.

FURTHER CONSULTATION

154 Before the release of the final report by 28 February 2020, there will be opportunities for consultation on this assessment. For further information about this category, please contact Naomi Elliott at Naomi.Elliott@ccg.gov.au.

ATTACHMENT 17

ROADS

Summary of proposed changes to the 2015 Review methodology

- The Commission has revisited how it estimates rural road length. New road connections have been added, to link significant areas, including mines, ports and national parks. The number of lanes on roads is also taken into account. The adjustment for unsealed roads has been removed.
- Local roads expenses have been reallocated proportionately to the urban and rural road components.
- Bridges and tunnels are now assessed using actual lengths of bridges and tunnels that are State managed, measured across comparable structures.
- The number of heavy vehicle classes has been reduced from five to three. Light commercial vehicles are now classified with passenger vehicles.
- Other services expenses have been reallocated proportionately across the rural roads, urban roads and bridges and tunnels components.

- 1 This attachment contains the Commission’s draft proposals for the Roads category following consultation with the Commonwealth and States.

SERVICE OVERVIEW

- 2 State expenditure on roads was \$15.3 billion in 2017-18, representing 6.2% of total State expenditure (Table 1). State spending on this function is based on the National Transport Commission (NTC) expenditure reporting categories and comprises expenses for:
 - road maintenance, which corresponds to NTC categories A and B
 - bridges and tunnels maintenance and rehabilitation, which corresponds to NTC category C
 - road rehabilitation, which corresponds to NTC category D
 - road and bridges/tunnels construction, which corresponds to NTC category F
 - other road related expenses, which corresponds to NTC categories E, G and H.

- 3 Other road related expenses cover road safety, traffic management and other transport activities (such as the administration of driver licensing, motor vehicle registration, heavy vehicle regulation and road transport planning administration).
- 4 State recurrent roads expenses and investment in roads infrastructure are assessed separately.

Table 1 Roads expenditure by State, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Expenses (\$m)	2 218	2 156	1 173	1 108	304	114	54	203	7 329
Investment (\$m)	3 340	1 491	1 339	902	483	63	85	287	7 991
Total expenditure (\$m)	5 557	3 647	2 512	2 009	787	177	140	490	15 320
Expenses (\$pc)	280	338	236	429	176	218	131	823	296
Investment (\$pc)	422	234	270	349	280	120	205	1 163	323
Total expenditure (\$pc)	702	571	506	778	455	338	336	1 986	618
Proportion of total expenditure (%)	7.3	5.9	5.1	7.4	4.7	3.4	3.0	8.1	6.2

Note: Expenditure shown on a gross basis.

Source: Commission calculation using State budget data.

- 5 Table 2 shows the share of State expenditure on roads from 2014-15 to 2017-18.

Table 2 Roads expenditure, 2014-15 to 2017-18

	2014-15	2015-16	2016-17	2017-18
Total expenditure (\$m)	12 862	13 220	15 543	15 320
Proportion of total expenditure (%)	6.2	6.1	6.7	6.2

Note: Expenditure shown on a gross basis.

Source: Commission calculation using ABS Government Finance Statistics (GFS) and State budget data.

- 6 User charges were \$1.7 billion in 2017-18 and include fines, license fees and tolls. In this category, user charges are assessed on an equal per capita (EPC) basis in the Other revenue category.

Table 3 Roads, user charges, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Revenue (\$m)	310	413	576	183	123	35	9	17	1 666
Revenue (\$pc)	39	65	116	71	71	67	22	69	67

Note: User charges for some States appear high because they may include some user charges that could not be separated out but likely should be classified to the Transport category.

User charges refer to revenue from the sale of goods and services classified in GFS to economic type framework (ETF) 112.

Source: Commission calculation using ABS GFS and State budget data.

State roles and responsibilities

- 7 State governments fund and maintain the highways and other major roads for which they are responsible.
- 8 State governments also provide some supplementary financial support for the roads that are the responsibility of local governments. Where they take on responsibility for minor local roads, they also fund these services. The reasons for, and nature of, this funding are discussed in more detail in the Local roads section.
- 9 In addition to maintaining bridges and tunnels on State roads, some States fund part or all of the cost of maintaining some bridges on roads that are the responsibility of local governments, for example bridges with heritage value, high replacement cost or technical significance.
- 10 States receive roads-related revenue from vehicle registrations, stamp duty and user charges (such as licence fees, tolls and fines and the sale of goods and services, such as number plates). This revenue is assessed in the Motor taxes or Other revenue categories.
- 11 Depending on the contractual arrangements surrounding privately operated roads, States may receive various payments from the operators; these may be paid in cash, but are generally paid as promissory notes.

Commonwealth roles and responsibilities

- 12 In addition to general revenue assistance, the Commonwealth provides funding to the States for roads through national partnership payments (NPPs). Table 4 shows the main Commonwealth payments to the States for roads maintenance and investment in 2017-18.

Table 4 Commonwealth payments to the States for Roads, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Infrastructure Investment program									
Investment - NNR (\$m)	988	226	948	307	336	85	0	0	2 890
Maintenance (\$m)	104	60	84	49	28	7	1	17	350
Off-network - Road (\$m)	68	3	74	94	36	17	0	12	304
Black spot projects (\$m)	33	20	21	14	7	2	2	1	100
Other (\$m)	60	29	76	90	25	3	6	19	308
Total (\$m)	1 253	340	1 203	553	432	112	9	49	3 952
Total (\$pc)	158	53	242	214	250	214	22	199	160

Note: Table shows major payments only. Commonwealth Own Purpose Expenses (COPEs) are not included. Payments that the Commission treats as 'no impact' are included in the table.

Source: Commonwealth *Final Budget Outcome, 2017-18*.

- 13 The Australian Government funds roads projects under the *National Land Transport Act 2014* and *Nation-building Funds Act 2008* through the *National Partnership on Land Transport Infrastructure Projects*. The objective of this NPP is to provide a safe, sustainable, national transport system that enhances the interconnectivity of corridors of significant economic opportunity across Australia. The outcomes to be achieved are:
- improved land transport infrastructure that supports economic growth and productivity
 - improved connectivity for communities, regions and industry
 - improved transport safety
 - integrated and innovative network-wide planning for land transport infrastructure projects.
- 14 The funding provided to the States by the Commonwealth assists with meeting road expenses. Commonwealth roads funding to the States comprises \$3.6 billion in 2017-18 for road construction, including that relating to National Network Roads (NNR), and \$350 million in 2017-18 for maintenance.
- 15 The Commonwealth also provides payments through the States for purposes outside State responsibilities, such as \$1 067 million in untied local roads grants in 2017-18.
- 16 The complete list of Commonwealth payments and their treatment is available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).¹

CATEGORY STRUCTURE

- 17 The assessment of Roads expenses is undertaken in three components:
- rural roads
 - urban roads
 - bridges and tunnels.
- 18 Components allow different disability assessments to apply to sub-functions.
- 19 Table 5 shows the category's assessment structure, the size of each component and the disabilities that apply.

¹ Most Commonwealth payments to the States affect the grant distribution but some do not. The Commission refers to payments that affect the grant distribution as 'impact' payments. For more information, see Attachment 2 – Commonwealth payments.

Table 5 Category structure, Roads, 2017-18

Component	Component expense	Disability	Influence measured by disability
	\$m		
Rural roads	4 166	Length and use	Recognises that the length of the rural road network, traffic volume and heavy vehicle use influence the cost of providing road maintenance services in rural areas.
		Regional costs	Recognises the differences in the cost of providing services to different areas within a State (applied to road length only).
		Wage costs	Recognises the differences in wage costs between States.
Urban roads	2 789	Length and use	Recognises that the length of the urban road network, traffic volume and heavy vehicle use influence the cost of providing road maintenance services in urban areas.
		Wage costs	Recognises the differences in wage costs between States.
Bridges and tunnels	374	Length and use	Recognises that the length of bridges and tunnels and heavy vehicle use influence the cost of providing bridges and tunnel maintenance services.
		Regional costs	Recognises the differences in the cost of providing services to different areas within a State.
		Wage costs	Recognises the differences in wage costs between States.

Note: This table only includes roads expenses. It does not include Roads investment.

Source: Commission calculation using ABS GFS and State budget data.

Category and component expenses

- 20 The main data sources for calculating category expenses are ABS Government Finance Statistics (GFS) and State budget data.²
- 21 Data on State expenses, as reported to the NTC, are used to derive the component weights of the Roads category, and for the urban and rural roads investment assessments. The component weights are then applied to ABS GFS expenses (the NTC data do not exactly align with GFS data). Table 6 shows the NTC categories and the Australia-wide total reported expenditure for each category in 2017-18.

² Unless otherwise stated, category and component expenses for the first two assessment years are sourced from ABS GFS. States provide data for the most recent assessment year because GFS data are not available in time for the annual update.

Table 6 NTC State expenditure data, 2017-18

	Rural	Urban	Bridges	Total
				\$m
A: Servicing and operating	421	478	-	898
B: Road pavement and shoulder construction				
B1: Routine maintenance	449	177	-	626
B2: Periodic surface maintenance	596	224	-	819
C: Bridge maintenance/rehab (a)	-	-	288	288
D: Road rehabilitation	742	253	-	995
E: Low-cost safety/traffic	706	806	-	1 512
F: Asset extension/improvements				
F1: Pavement improvements	854	1 018	-	1 872
F2: Bridge improvements (a)	590	711	-	1 300
F3: Land acquisition, earthworks, other extensions/improvement expenditure	2 026	2 818	-	4 843
G: Other miscellaneous activities				
G1: Corporate services	-	-	-	796
G2: Enforcement of heavy vehicle regulatory costs	87	71	-	158
G3: Vehicle registration	-	-	-	313
G4: Driver licensing	-	-	-	194
G5: Loan servicing	-	-	-	33
H: Other road-related payments				
H1: Financial assistance to councils for work on council managed arterials (b)	-	-	-	436
H2: Payments to councils for contract work on State managed roads (b)	-	-	-	475
H3: Spending on local access roads in unincorporated areas	-	-	-	11
H4: Direct spending on council managed local access roads	-	-	-	230
H5: Any other direct State spending on local access roads	-	-	-	105
Total	6 470	6 555	288	14 995

Note: Loan servicing spending (G5) does not contribute to the component weight calculations.

(a) Expenditure on tunnels also falls under these categories.

(b) While the NTC reports these categories separately, the expenses are also included in the expenses for categories A to G. Hence, these expenses are double-counted in this presentation.

Source: State expenses reported to the NTC for 2017-18.

22 The urban and rural roads components include expenses for:

- A: Servicing and operating
- B: Road pavement and shoulder construction
- D: Road rehabilitation
- E: Low-cost safety/traffic
- G2: Enforcement of heavy vehicle regulatory costs

- H3: Spending on local access roads in unincorporated areas
 - H4: Direct spending on council managed local access roads
 - H5: Any other direct State spending on local access roads.
- 23 The bridges and tunnels component includes spending on:
- C: Bridge maintenance/rehabilitation.
- 24 Expenses relating to other road related payments have been distributed proportionately between all components, this includes spending on:
- G1: Corporate services
 - G3: Vehicle registration
 - G4: Driver licensing.
- 25 The roads investment assessment includes:
- F: Asset extension/improvements.
- 26 G5: Loan servicing is assessed within the Other expenses category.
- 27 NTC expenses relating to category G (excluding G2) have been reallocated on a proportional basis amongst the urban roads, rural roads and bridges/tunnels components. Local roads expenses (categories H3 to H5) have been reallocated on a proportional basis between the rural roads and urban roads components.

ASSESSMENT APPROACH

Conceptual framework

- 28 In the rural roads and urban roads components, the Commission recognises that the cost of maintaining roads is affected by the following influences:
- road length
 - traffic volume
 - heavy vehicle use.
- 29 The selection of these three influences and their relative weights in the roads assessment is based on the work of the NTC, which is responsible for determining heavy vehicle charges.³
- 30 As part of that responsibility the NTC has developed a cost allocation matrix that splits the cost of maintaining roads between attributable costs and non-attributable costs.

³ NTC PAYGO cost allocation formulae, available on the [NTC website](https://ntc.gov.au/heavy-vehicles/heavy-vehicle-charges/) (https://ntc.gov.au/heavy-vehicles/heavy-vehicle-charges/).

- Attributable costs are those that vary with the volume of traffic on roads, including heavy vehicle use. These costs would not be incurred if traffic volume fell to zero.
- Non-attributable costs are those incurred regardless of the volume of traffic, which is essentially influenced by road length. Some non-attributable costs such as those relating to corporate services are spread across the entire roads assessment.

31 The NTC’s approach and results reflect its considerable expertise and is an evidence-based approach for identifying the relative importance of the drivers of roads expenses.

32 Table 7 provides the recurrent assessment cost allocation for the relevant NTC categories. The cost allocation is discussed in further detail below.

Table 7 Roads recurrent cost allocation based on NTC cost allocation formulae

		Road length	Traffic volume	Heavy vehicle use	Bridge and tunnel length	Bridge and tunnel heavy vehicle use	Local roads	Other services
		%	%	%	%	%	%	%
A	Servicing and operating	0	100	0	0	0	0	0
B1	Routine maintenance	24	38	38	0	0	0	0
B2	Periodic surface maintenance	30	10	60	0	0	0	0
C	Bridge maintenance/rehab	0	0	0	67	33	0	0
D	Road rehabilitation	55	0	45	0	0	0	0
E	Low-cost safety/traffic	0	100	0	0	0	0	0
G1	Corporate services	0	0	0	0	0	0	100
G2	Enforcement of HV regulations	0	0	100	0	0	0	0
G3	Vehicle registration	0	0	0	0	0	0	100
G4	Driver licensing	0	0	0	0	0	0	100
H3-H5	Spending on local access roads	0	0	0	0	0	100	0

Source: NTC PAYGO cost allocation formulae.

33 **Traffic volume.** The NTC recognises that traffic volume has an impact on the cost of maintaining roads because:

- roads with expected high traffic volumes are usually built to higher standards and therefore will cost more to maintain
- roads with high traffic volumes have a higher level of traffic control and safety measures (such as signage, traffic lights and worker protection requirements during maintenance work), which cost more.

- 34 In its cost allocation matrix, the NTC allocates costs attributable to traffic volume⁴ to the following categories:
- servicing and operating expenses (100%)
 - routine maintenance of road pavement and shoulder (38%)
 - periodic surface maintenance of sealed road pavement and shoulder (10%)
 - low-cost safety and traffic improvements (100%).
- 35 **Heavy vehicle use.** The NTC recognises in its cost allocation matrix that heavy vehicles cause more wear and tear to roads than cars. This is mainly due to their weight and number of axles and trailers. In contrast, the weight of a car has no or little impact on roads. Heavy vehicle use results in minor and major maintenance to restore the pavement to acceptable service standards. There are also regulatory costs.
- 36 In its cost allocation matrix, the NTC allocates costs attributable to heavy vehicle road use⁵ to the following categories:
- routine maintenance of road pavement and shoulder (38%)
 - periodic surface maintenance of sealed road pavement and shoulder (60%)
 - road rehabilitation (45%)
 - heavy vehicle regulatory costs (100%).
- 37 **Road length.** The non-attributable costs are essentially related to road length. However, the NTC considers that the geographic location of the road, climate and topography can affect costs differentially.
- 38 In its cost allocation matrix, the NTC allocates non-attributable costs that are related to road length to the following categories:
- routine maintenance of road pavement and shoulder (24%)
 - periodic surface maintenance of sealed road pavement and shoulder (30%)
 - road rehabilitation (55%).
- 39 The NTC assumes, in its cost allocation formula, that the share of attributable and non-attributable costs are the same for all road types. However, the NTC recognises that urban roads are generally built to higher standards than rural roads and are therefore more costly to maintain.
- 40 Urban road length is essentially driven by the number and size of urban centres. In contrast, rural road length is mainly driven by the geographical size and the

⁴ The NTC directly attributes these costs to the impact of passenger car equivalent-kilometres and vehicle kilometres travelled, which the Commission aggregates to the impact of traffic volume.

⁵ The NTC directly attributes these costs to the impact of equivalent standard axle-kilometres, average gross mass-kilometres and heavy vehicle vehicle kilometres travelled, which the Commission aggregates to the impact of heavy vehicle use.

dispersion of population centres. For example, the ACT is a compact jurisdiction where the road network comprises mostly roads within the Canberra urban area. By contrast, Queensland has a large road network. It has a large network of urban roads because of its many urban population centres. Furthermore, since those centres are scattered across a large land area, it also has a large network of rural roads connecting them.

- 41 State policy choices on the number of alternative routes between urban centres and the degree to which States give responsibility for roads to local government may also affect the length of State government roads.
- 42 **Bridges and tunnels.** The NTC cost matrix recognises recurrent bridge and tunnel maintenance and rehabilitation as well as investment in bridge and tunnel improvements.
- 43 Bridges and tunnels cost more to build and maintain than roads. They are required because of topological features such as waterways and, in some cases, changes in elevation. States also respond to safety issues and the complexity of their road and rail networks by building bridges and tunnels over or under other sections of the networks to avoid intersections. The total length of these structures is a primary driver of bridge and tunnel expenses.
- 44 Other influences on bridge and tunnel maintenance expenses and investment are the size of a State's road network, which increases the likelihood of bridges and tunnels across the networks; and traffic volume, including heavy vehicle use, which influence the type and size of bridges built, and the maintenance costs.

Measurement of the rural and urban road disabilities

Rural road length

- 45 The Commission could not use the actual State road length to measure States' needs because the classifications of State roads varied across the States. Because of this, the Commission needs to split the rural road network between roads that are, on average, the responsibility of State governments and roads that are, on average, the responsibility of local governments.
- 46 To achieve this, the Commission has developed an assessed rural State road network. It used an algorithm that measures rural road lane-kilometres by:
 - connecting all ABS Urban Centres/Localities (UCLs)
 - connecting significant mines to their nearest port
 - connecting ports to their nearest UCL
 - connecting national parks to their nearest road intersection.

- 47 This algorithm was run across the Pitney Bowes routable 'RouteFinder Links' dataset using its RouteFinder software to select the appropriate roads for inclusion.
- 48 The lane-kilometre measure assumes two lanes per road.⁶ Using State collected data, road lengths were adjusted to reflect the existence of additional lanes. An investigation of State spatial data shows that in rural areas, all roads with more than two lanes are identified by the algorithm and tend to be on highways and freeways. This pattern indicates that the decision to provide additional lanes is primarily driven by need rather than policy choice.
- 49 The Commission was unable to identify reliable national datasets suitable for including roads to additional areas of tourism and agricultural areas.
- 50 **Roads between UCLs.** Lane-kilometres between UCLs were measured by:
- connecting all UCLs with a population of more than 1 000 using the fastest driving route to all adjacent UCLs with a population over 1 000
 - connecting all UCLs with a population less than 1 000 to their nearest two UCLs with a population of more than 1 000 using the fastest connection⁷
 - excluding all roads within UCLs with populations over 40 000, as these are considered urban roads.
- 51 **Roads to mines, ports and national parks.** States are generally responsible for roads to significant areas such as mines, ports and national parks, which warrants their inclusion in the algorithm.
- 52 The Commission sourced spatial data on the location of mines and ports from Geoscience Australia.⁸ Significant mines were those with a significance score of two or above in the Geoscience dataset. The majority of mining production is assumed to be exported and as such, connections have been added to ports rather than UCLs.
- 53 The Commission recognises that some mining roads are owned and maintained by the private sector, but it has assumed that under average policy these roads are

⁶ This assumption was made because lane information is not available for a small proportion of State roads. However, checks showed that it can be safely assumed these roads had no more than two lanes.

⁷ The connections were calculated using PitneyBowes RouteFinder software and the PitneyBowes RouteFinder Links dataset.

⁸ <http://www.australianminesatlas.gov.au/mapping/downloads.html>; these data relate to mines that were operating in 2015, and ports that were operating in 2009. These are the best available data that have been identified. Spatial information relating to [wind farms](https://www.nwfc.gov.au/wind-farms) (<https://www.nwfc.gov.au/wind-farms>) and [hydro stations](https://ecat.ga.gov.au/geonetwork/srv/eng/catalog.search#/metadata/70142) (<https://ecat.ga.gov.au/geonetwork/srv/eng/catalog.search#/metadata/70142>) has also been identified. To date, reliable and comparable national datasets relating to grain bins and areas of mining exploration have not been identified. States are invited to provide information relating to such datasets and on more up to date national datasets pertaining to national parks, ports, mines, hydro power stations and wind farms.

maintained by State governments.⁹ There is no reliable information on the length of privately funded roads to mines in each State to make an adjustment.

- 54 Spatial information on the location of national parks was sourced from the PitneyBowes StreetPro dataset.¹⁰
- 55 **Road length estimates.** Table 8 shows the measures of rural road lane-kilometres the Commission intends to adopt for the 2020 Review. The table shows the contribution of roads to significant areas to the total measure of road length.

Table 8 Estimated rural road lane-kilometres, 2020 Review

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	km	km	km	km	km	km	km	km	km
Lane-kilometres	68 065	38 386	64 487	45 642	27 118	7 548	183	26 935	278 363
To ports	12	44	240	505	224	71	0	116	1 211
To mines	628	123	1 564	3 871	150	0	0	28	6 364
To national parks (a)	4 251	622	12 108	2 680	1 829	795	112	1 430	23 827
Additional lanes (b)	1 627	555	527	532	512	192	0	99	4 045
Total	74 584	39 729	78 926	53 229	29 832	8 606	295	28 608	313 809
	%	%	%	%	%	%	%	%	%
Lane-kilometres	24.5	13.8	23.2	16.4	9.7	2.7	0.1	9.7	100.0
To ports	1.0	3.6	19.8	41.7	18.5	5.8	0.0	9.5	100.0
To mines	9.9	1.9	24.6	60.8	2.4	0.0	0.0	0.4	100.0
To national parks (a)	17.8	2.6	50.8	11.2	7.7	3.3	0.5	6.0	100.0
Additional lanes	40.2	13.7	13.0	13.1	12.7	4.8	0.0	2.5	100.0
Total	23.8	12.7	25.2	17.0	9.5	2.7	0.1	9.1	100.0

Note: The figures shown in this table remain subject to further checking and some minor adjustments prior to the final report. The lane-kilometre measure assumes two lanes per road.

(a) Queensland has by far the greatest length of roads connecting national parks to the network. This result was interrogated further and the Commission has concluded that this accurately represents need as, on average, national parks in Queensland tend to be further from the arterial road network than those of other States.

(b) Further work will be done before the final report to calculate the correct length of additional lanes in the ACT and to confirm the length in the Northern Territory. The additional lane calculation process for these States differed due to the format of their roads spatial data.

Source: Commission calculation using State road spatial data.

⁹ During the Western Australian State visit, the Main Roads Department told the Commission that mining companies contribute to the cost of maintaining roads.

¹⁰ The PitneyBowes StreetPro dataset was used to identify National Parks. This dataset incorporates PSMA Australia data including that relating to National Parks. These parks were connected to their nearest road intersection (this was more feasible than programming a route to the nearest road) rather than the nearest town in order to give preference to routes that take advantage of major routes already on the network.

Urban road length

- 56 State populations within urban centres are used as a proxy for urban road lengths. Urban centres are defined as ABS UCLs of 40 000 or more. Table 9 shows the State shares of urban population.

Table 9 Urban population by State, December 2017

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Urban population ('000)	5 920	5 047	3 717	2 043	1 203	262	415	130	18 739
State shares (%)	31.6	26.9	19.8	10.9	6.4	1.4	2.2	0.7	100.0

Source: ABS estimated resident population December 2017 (scaled from June 2017).

Traffic volume

- 57 The assessment of traffic volume is based on total vehicle kilometres travelled (VKT) data from the Bureau of Infrastructure, Transport and Regional Economics (BITRE). Total VKT measures the total distance travelled by all vehicles. This measure treats a kilometre travelled by a car the same as a kilometre travelled by a heavy truck.
- 58 The traffic volume data from BITRE are based on the ABS' Survey of Motor Vehicle Use (SMVU).¹¹ BITRE adjust the SMVU data¹² and smooth it using averages from several survey years. BITRE also make adjustments to remove data relating to travel on local roads and to split the data between travel on urban and rural roads. Rural and urban traffic volume by State are shown in Table 10.

Table 10 Traffic volume in rural and urban areas by State, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Rural traffic volume ('000 vkt)	12 342	9 209	8 968	5 454	4 255	1 135	0	608	41 973
Urban traffic volume ('000 vkt)	39 036	34 822	27 282	13 304	7 196	2 455	2 646	818	127 560
State share of rural (%)	29.4	21.9	21.4	13.0	10.1	2.7	0.0	1.4	100.0
State share of urban (%)	30.6	27.3	21.4	10.4	5.6	1.9	2.1	0.6	100.0

Source: BITRE vkt data.

Heavy vehicle use

- 59 The assessment of heavy vehicle use is based on average gross mass-kilometres (AGM-km) data from BITRE.

¹¹ It uses the SMVU (ABS Cat. No. 9208.0) dataset 'Total distance travelled by area of operation'. This ensures that the traffic data reflect all travel in a State, not just travel by vehicles registered in that State.

¹² BITRE adjusts the SMVU data using data such as fuel sales, off-road use, fleet fuel use modelling and traffic data from monitored networks in cities.

- 60 AGM-km for each State is estimated by applying Australian average AGMs for each aggregated BITRE vehicle class (derived from NTC trend data¹³) to the kilometres travelled by aggregated class of heavy vehicle in each State. As with the traffic volume measure, the heavy vehicle travel data have been adjusted to remove travel on local roads and to split the data between urban and rural roads.
- 61 The three vehicle classes into which the data are aggregated are light vehicles (passenger and commercial vehicles weighing less than 4.5 tonnes), articulated trucks and other heavy vehicles. A trend AGM weight is applied to articulated trucks and other heavy vehicles as shown in Table 11.

Table 11 Trend average gross mass by aggregated BITRE vehicle classes

	Trend AGM
	Tonnes
Light vehicles	-
Articulated trucks	42.7
Other heavy vehicles	8.9

Source: NTC trend data.

- 62 Rural and urban heavy vehicle use by State, calculated by applying these AGM trend weights to traffic volume data by vehicle class, are shown in Table 12.

Table 12 Heavy vehicle use in rural and urban areas by State, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Rural heavy vehicle use (million AGM-km)	52 536	35 739	40 497	26 425	18 382	3 958	0	2 933	180 470
Urban heavy vehicle use (million AGM-km)	80 261	57 445	51 657	21 369	13 504	4 324	1 551	1 296	231 408
State share of rural (%)	29.1	19.8	22.4	14.6	10.2	2.2	0.0	1.6	100.0
State share of urban (%)	34.7	24.8	22.3	9.2	5.8	1.9	0.7	0.6	100.0

Source: NTC trend data and BITRE vkt data.

Rural roads component

Rural road length, traffic volume and heavy vehicle use

- 63 The assessments of the rural road length, traffic volume and heavy vehicle use disabilities are described above.¹⁴
- 64 For the derivation of the component assessed expenses, the disabilities are weighted, for 2017-18 as follows:

¹³ The NTC last calculated trend data in 2014. It was based on the ABS' SMVU data between 2007 and 2014. Trend data are used to derive trend AGMs for the vehicle classes in the BITRE data.

¹⁴ See Table 9, Table 10 and Table 12.

- 23.2% for rural road length
- 45.2% for traffic volume
- 31.6% for heavy vehicle use.

65 The weights are derived from NTC data.

Regional costs

66 Differences in the cost of providing services to different regions within a State affect State expenses. The sourcing of road construction and maintenance quarry materials is unlikely to have any relationship to remoteness, but the greater distances in remote areas does generally affect the transport of plant and equipment as well as materials. A regional cost gradient cannot be readily measured, but the conceptual case for one is valid. As such, the Commission has retained the application of a general cost gradient to rural road length. For a description of the method see Attachment 25 — Geography.

Wage costs

67 Differences in wage costs between States have a differential effect on the cost of providing services. There is a general method for measuring the influence of wage costs in components where the disability applies. For a description of the method see Attachment 24 — Wages costs.

Component calculations

68 Table 13 shows the calculation of total assessed expenses for the component in 2017-18. Total assessed expense is the sum of road length, traffic volume and heavy vehicle use assessed expenses multiplied by the regional costs and wage costs factors.

Table 13 Illustrative assessment, rural roads component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Road length (lane-km)	74 584	39 729	78 926	53 229	29 832	8 606	295	28 608	313 809
Road length (\$m)	229	122	243	164	92	26	1	88	965
Traffic volume ('000 vkt)	12 342	9 209	8 968	5 454	4 255	1 135	0	608	41 973
Traffic volume (\$m)	554	413	403	245	191	51	0	27	1 884
Heavy vehicle use (million AGM-km)	52 536	35 739	40 497	26 425	18 382	3 958	0	2 933	180 470
Heavy vehicle use (\$m)	384	261	296	193	134	29	0	21	1 317
Regional costs factor (a)	0.936	0.880	1.036	1.064	0.998	0.947	0.852	1.134	1.000
Wage costs factor	1.006	1.004	0.996	0.993	0.975	0.971	1.048	1.030	1.000
Assessed expenses (\$m)	1 161	786	948	609	407	102	1	153	4 166
Assessed expenses (\$pc)	147	123	191	236	235	194	2	621	168

(a) The regional costs factors shown in this table are placeholders. Final factors will be calculated for the final report.

Source: Commission calculation using PitneyBowes RouteFinder links dataset and software, NTC trend data and BITRE vkt data.

Urban roads component

Urban road length, traffic volume and heavy vehicle use

69 The assessments of the urban road length, traffic volume and heavy vehicle use disabilities are detailed above.¹⁵

70 For the derivation of the component assessed expenses, the disabilities are weighted, for 2017-18 as follows:

- 12.4% for urban road length
- 68.4% for traffic volume
- 19.2% for heavy vehicle use.

71 The weights are derived from NTC data.

Regional costs

72 The Commission intends not to apply a separate regional costs factor to urban roads expenses because there is no clear conceptual case that the location of major urban centres would affect the cost of road maintenance.

Wage costs

73 Differences in wage costs between States have a differential effect on the cost of providing services. There is a general method for measuring the influence of wage

¹⁵ See Table 9, Table 10 and Table 12.

costs in components where the disability applies. For a description of the method see Attachment 24 — Wages costs.

Component calculations

74 Table 14 shows the calculation of total assessed expenses for the component in 2017-18. Total assessed expense is the sum of road length, traffic volume and heavy vehicle use assessed expenses multiplied by the wage costs factors.

Table 14 Illustrative assessment, urban roads component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Urban population ('000)	5 920	5 047	3 717	2 043	1 203	262	415	130	18 739
Road length (\$m)	109	93	69	38	22	5	8	2	345
Traffic volume ('000 vkt)	39 036	34 822	27 282	13 304	7 196	2 455	2 646	818	127 560
Traffic volume (\$m)	584	521	408	199	108	37	40	12	1 907
Heavy vehicle use (million AGM-km)	80 261	57 445	51 657	21 369	13 504	4 324	1 551	1 296	231 408
Heavy vehicle use (\$m)	186	133	120	50	31	10	4	3	536
Wage costs factor	1.006	1.004	0.996	0.993	0.975	0.971	1.048	1.030	1.000
Assessed expenses (\$m)	884	749	594	284	157	50	53	18	2 789
Assessed expenses (\$pc)	112	117	120	110	91	95	128	74	113

Source: Commission calculation using ABS estimated resident population December 2017, NTC trend data and BITRE vkt data.

Bridges and tunnels

75 The assessment of the bridges and tunnel length disability is detailed below.

76 For the derivation of the component assessed expenses, the disabilities are weighted, for 2017-18, as follows:

- 67% for bridge and tunnel length
- 33% for heavy vehicle use.

77 The weights are derived from NTC data.

Structure length

78 The bridges and tunnels length component is measured using actual lengths of bridges and tunnels managed by State governments. These lengths are calculated using open source and State provided data. Only structures exceeding four metres in length were included to ensure comparability across datasets. These lengths are shown in Table 15.

Table 15 Estimated bridge and tunnel length by State

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	km	km	km	km	km	km	km	km	km
Bridge length	191	137	199	55	29	16	11	13	650
Tunnel length	11	0	0	2	1	0	0	0	14
Total length	202	137	199	57	30	16	11	13	664
State share (%)	30	21	30	9	5	2	2	2	100

Note: Victoria, Queensland and South Australia's data did not include tunnels. Confirmation is required that the State governments do not fund the maintenance of the tunnels in Victoria and Queensland and that the South Australian Government funds the maintenance of the Heyson tunnel.

Source: Commission calculations using State provided data and data from State Road authorities' websites.

Heavy vehicle use

79 The assessment of the heavy vehicle use disabilities for bridges and tunnels uses average gross mass-kilometres (AGM-km) data from BITRE, the same as that for roads, but without the rural/urban disaggregation. These use rates are shown in Table 16.

Table 16 Estimated total heavy vehicle use rates by State, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Total heavy vehicle use (million AGM-km)	132 797	93 185	92 154	47 793	31 886	8 282	1 551	4 229	411 878
State share (%)	32.2	22.6	22.4	11.6	7.7	2.0	0.4	1.0	100

Source: BITRE vkt data.

Regional costs

80 The Commission intends to apply a separate regional costs factor to bridge and tunnel expenses based on the length of bridges and tunnels by remoteness regions.

Wage costs

81 Differences in wage costs between States have a differential effect on the cost of providing services. There is a general method for measuring the influence of wage costs in components where the disability applies. For a description of the method see Attachment 24 — Wages costs.

Component calculations

82 Table 17 shows the calculation of total assessed expenses for the component in 2017-18. Total assessed expense is the sum of bridge and tunnel length, and heavy vehicle use assessed expenses multiplied by the regional costs and wage costs factors.

Table 17 Illustrative assessment, bridges and tunnels component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Structure length (km)	202	137	199	57	30	16	11	13	664
Length assessed expenses (\$m)	76	52	75	21	11	6	4	5	251
Heavy vehicle use (million AGM-km)	132 797	93 185	92 154	47 793	31 886	8 282	1 551	4 229	411 878
Heavy vehicle use (\$m)	40	28	28	14	10	2	0	1	123
Regional costs factor (a)	0.936	0.880	1.036	1.064	0.998	0.947	0.852	1.134	1.000
Wage costs factor	1.006	1.004	0.996	0.993	0.975	0.971	1.048	1.030	1.000
Assessed expenses (\$m)	114	75	107	38	21	8	4	7	374
Assessed expenses (\$pc)	14	12	22	15	12	15	11	28	15

(a) The regional costs factors shown in this table are placeholders. Final factors will be calculated for the final report.

Source: Commission calculation using State data.

CATEGORY CALCULATIONS

83 Table 18 brings the assessed expenses for each component together to derive the total assessed expenses for each State for the category. It shows at the component level how each disability assessment moves expenses away from an equal per capita (EPC) distribution to obtain assessed expenses.

Table 18 Illustrative category assessment, Roads, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Rural roads									
Equal per capita	168	168	168	168	168	168	168	168	168
Road length	-10	-20	10	24	14	11	-37	317	0
Traffic volume	-6	-11	5	19	34	21	-76	35	0
Heavy vehicle use	-5	-12	6	21	24	2	-53	34	0
Regional costs	-1	-3	3	4	2	-1	-4	7	0
Wage costs	1	1	-1	-1	-4	-5	8	5	0
Assessed expenses	147	123	191	236	235	194	2	621	168
Urban roads									
Equal per capita	113	113	113	113	113	113	113	113	113
Road length	0	1	0	1	-1	-5	4	-4	0
Traffic volume	-3	5	5	0	-15	-7	18	-27	0
Heavy vehicle use	2	-1	2	-2	-4	-3	-13	-9	0
Wage costs	1	0	0	-1	-3	-3	5	3	0
Assessed expenses	112	117	120	110	91	95	128	74	113
Bridges and tunnels									
Equal per capita	15	15	15	15	15	15	15	15	15
Length	0	-2	5	-2	-4	1	0	9	0
Heavy vehicle use	0	-1	1	1	1	0	-4	0	0
Regional costs	0	-1	1	1	0	0	-1	2	0
Wage costs	0	0	0	0	0	0	1	0	0
Assessed expenses (a)	14	12	22	15	12	15	11	28	15
Total assessed expenses	273	252	332	360	338	305	140	723	296

Note: Table may not add due to interactions between disabilities and rounding. The EPC expenses and assessed expenses are total spending per capita. The amounts for each disability are redistributions from an EPC assessment.

(a) While the assessment of bridge and tunnel expenses is not material, the contribution of this disability to the investment assessment is material.

Source: Commission calculation.

INFRASTRUCTURE ASSESSMENT

84 States require infrastructure to support service delivery. State infrastructure requirements are assessed in the Investment category. The main driver of investment in roads related infrastructure is growth in traffic volume and heavy vehicle use across both the rural and urban road networks. Urban population growth also drives investment in urban roads. Interstate differences in construction costs are also recognised.

85 Roads investment needs are assessed using capital stock factors derived from the recurrent roads assessment sub-component factors.¹⁶ These factors are combined into a single factor each for rural roads and urban roads using weights derived from NTC category expenses. Table 19 provides the investment assessment cost allocation for the relevant NTC categories.

Table 19 Roads investment cost allocation based on NTC cost allocation formulae

	Road length	Traffic volume	Heavy vehicle use	Bridges
	%	%	%	%
F1 Pavement improvements	55	0	45	0
F2 Bridge improvements	0	0	0	100
F3 Land acquisition, earthworks, other extensions/improvements	90	10	0	0

Source: NTC PAYGO cost allocation formulae.

86 Table 20 shows the calculation of total assessed investment for rural and urban roads for 2017-18. The stock factors for each of these investment components are calculated using the recurrent length, traffic volume, heavy vehicle use and bridges disabilities.

Table 20 Illustrative assessment, roads investment, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Rural roads									
Assessed opening stock (\$m)	37 625	22 341	36 832	21 931	12 808	3 789	493	9 510	145 329
Assessed closing stock (\$m)	38 726	23 044	37 991	22 538	13 167	3 908	508	9 787	149 669
Assessed change in stock (\$m)	1 101	703	1 159	607	359	118	15	277	4 340
Cost factor	1.008	0.958	0.991	1.080	1.005	0.976	1.008	1.178	1.000
Assessed investment (\$m)	1 089	656	1 136	649	356	114	14	326	4 340
Urban roads									
Assessed opening stock (\$m)	22 186	17 975	15 049	7 314	4 259	1 132	1 369	589	69 874
Assessed closing stock (\$m)	23 320	19 019	15 862	7 628	4 444	1 189	1 447	616	73 524
Assessed change in stock (\$m)	1 134	1 044	812	314	185	56	78	28	3 650
Cost factor	1.008	0.958	0.991	1.080	1.005	0.976	1.008	1.178	1.000
Assessed investment (\$m)	1 147	1 003	808	340	187	55	79	33	3 650
Total assessed investment (\$m)	2 236	1 659	1 943	989	543	170	92	359	7 991

Source: Commission calculation.

87 Interstate differences in construction costs are also recognised.

¹⁶ Capital stock factors are the ratio of assessed to average per capita expenses.

88 For a description of the Investment assessment, see Attachment 21 — Investment.

ASSESSMENT ISSUES

89 The 2015 Review assessments provided the starting point for the 2020 methodology review. In April 2018, Commission staff released a draft assessment paper (DAP) setting out staff proposals for the Roads category. States provided submissions on the proposals. The staff proposals and State submissions are available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

90 The main assessment issues for the category were:

- the appropriate method for assessing rural road length needs
- the appropriate treatment of rural unsealed road length
- the appropriate method for assessing urban road length needs
- where expenses relating to local roads should be assessed
- data sources to be used in the assessment of road use
- the assessment of expenses relating to bridges and tunnels
- where expenses relating to other road services should be assessed.

91 The following sections discuss the main issues for the Roads category, including State views.¹⁷

Rural road length

92 Commission staff proposed to re-estimate the rural road length through two possible approaches:

- using State actual road networks adjusted to ensure the inclusion of roads commonly classified as State roads and the exclusion of roads commonly classified as local roads to reflect average policy
- retaining the 2015 Review mapping algorithm approach with changes to incorporate all connections between urban centres, connections to smaller population centres and connections to certain areas of significance.

93 Victoria supported the development of an assessment based on actual road length. It argued that the rural road network is the result of historical decisions and best reflected the maintenance task of States.

¹⁷ State submissions often include significant detail and supporting evidence. In this attachment, the Commission responds to the arguments and evidence States presented in their submissions. For the full detail of State submissions, see the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

- 94 The Commission has not pursued the first approach because initial attempts to implement it showed that adjusting actual road length required extensive judgment about which roads to include and exclude.
- 95 Instead, the Commission has reviewed the algorithm used in the 2015 Review to measure rural road length and has made the following changes.
- A number of parameters used in the 2015 Review algorithm were changed to better reflect what States do.
 - Road connections to significant mines, ports and national parks were added. The 2015 Review method only included road connections between UCLs.
 - Road length was measured as lane-kilometres instead of road kilometres.
- 96 States generally supported the new measure of rural road length.
- 97 These parameters differ from those of the 2015 Review in the following ways.
- All UCLs are included, not just those with a population over 400. The Commission found that most UCLs are connected by State roads.
 - UCLs with a population less than 1 000 are connected to their nearest two UCLs with a population of more than 1 000 instead of their nearest six UCLs. Table 21 shows the average number of connecting roads for UCLs of different sizes. UCLs of less than 1 000 have about two connections on average. This suggests that six connections, as used in the last review, does not match what States do.
 - All UCLs with a population above 1 000 were connected to all adjacent UCLs with a population over 1 000. The threshold was lowered from UCLs with a population above 4 000 because it reflects better what States do on average.

Table 21 Average number of roads for UCLs of different size that intersect with other UCL borders

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Population of:									
0 to 400	1.6	1.8	1.3	1.2	2.0	1.4	1.0	0.7	1.5
400 to 700	1.9	2.4	1.4	1.3	2.9	1.9	0.0	1.0	1.9
700 to 1 000	2.6	3.1	1.8	1.3	3.8	2.2	0.0	1.1	2.3
1 000 to 4 000	3.3	3.8	2.4	2.0	4.0	3.4	0.0	1.4	3.1
4 000 to 7 000	3.4	5.2	3.8	2.4	4.5	1.8	0.0	6.0	3.8
7 000 to 10 000	4.5	7.2	3.9	3.0	3.0	0.0	0.0	0.0	4.9
10 000 and above	14.2	15.6	18.5	14.6	14.5	24.0	0.0	15.5	15.7
Less than 1 000	1.9	2.3	1.5	1.3	2.6	1.8	1.0	0.9	1.8
More than 1 000	5.3	6.6	4.8	4.3	5.8	6.3	0.0	3.3	5.4
Less than 4 000	2.4	2.8	1.8	1.4	3.0	2.2	1.0	1.0	2.2
More than 4 000	8.8	11.2	9.8	8.6	9.2	14.1	0.0	12.3	9.8

Source: Commission calculation using State roads spatial data.

- 98 Western Australia and the ACT did not support the reduction in the number of connections from six to two for UCLs with a population less than 1 000 because this did not reflect the circumstances for sparsely populated areas. However, two connections reflect what States do on average and incorporating additional connections tended to result in over-counts of road length for most States. In addition, Table 21 shows Western Australia has one of the lowest numbers of connections for UCLs with a population less than 1 000.
- 99 The Commission notes Victoria’s view that the assessed rural road network may not fully reflect all the actual State road connections, especially in the south-east of Australia. However, attempts to include all possible connections proved intractable in developing the mapping algorithm and, in most cases, there is only one clear direct connection between any two centres.¹⁸
- 100 The Commission does not support Western Australia’s view that traffic volume would capture needs for additional lanes. Traffic volume would likely influence the number of lanes on these roads but the maintenance costs for these roads is influenced by more than just traffic volume. The NTC methodology, which the Commission uses to attribute road costs to different influences, distinguishes between road length and use.
- 101 Western Australia argued that any higher capacity of local governments to provide regional and local distributor roads in more densely populated areas should be recognised in the methodology. The Commission considers that the algorithm measures comparable types of roads in each State and gives States the capacity to maintain networks consistent with average policy. In addition, there is no consistent measure of the relative fiscal capacity of local governments to support such an assessment.

Changes to the measure of rural road length

- 102 Table 22 compares the 2020 Review measure with that of the 2015 Review and State actual road length. All these measures are expressed as lane-kilometres. The 2015 Review road length has been multiplied by two to convert it to lane-kilometres with the assumption of two lanes for all roads. This allows for comparison with the 2020 Review approach.
- 103 States’ actual rural road lengths are policy influenced, which can make comparison with the Commission’s measure difficult. For example, Western Australia has a policy of allocating responsibility for some State-type roads to local governments. Consequently, its actual road length is less than the Commission’s estimates based on average policy.

¹⁸ It was not possible to capture all road connections without manual, judgment-based adjustments.

Table 22 Measure of rural road lengths, actual, 2015 Review and 2020 Review using revised algorithm parameters, lane-kilometres

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	km	km	km	km	km	km	km	km	km
Actual (a)	72 613	43 356	65 918	36 584	24 097	7 764	1 320	32 802	284 454
2015 Review (b)	53 132	31 428	57 610	41 760	23 108	5 366	12	21 448	233 864
2020 Review	74 584	39 729	78 926	53 229	29 832	8 606	295	28 608	313 809
	%	%	%	%	%	%	%	%	%
Actual share	25.5	15.2	23.2	12.9	8.5	2.7	0.5	11.5	100.0
2015 Review share	22.7	13.4	24.6	17.9	9.9	2.3	0.0	9.2	100.0
2020 Review share	23.8	12.7	25.2	17.0	9.5	2.7	0.1	9.1	100.0

(a) The actual rural road lane-kilometres assumes a minimum of two lanes and excludes local and local type roads in unincorporated areas that were included in the State provided spatial data. Specifically, it excludes New South Wales roads with a local or unincorporated road classification, South Australian roads with a rural local classification and Northern Territory roads with a NAASRA classification of 5: roads used almost exclusively for one activity or function which have not been otherwise assigned.

(b) These figures represent the total road length used in the 2015 Review, multiplied by two, prior to roads then assessed as unsealed being weighted by 0.5. The increase in total assessed road length from the 2015 Review to the 2020 Review is due to the use of updated data and refinements to the methodology.

Source: State road spatial data and Commission calculations using RouteFinder Links dataset.

104 Prior to the final report, the Commission intends to investigate further adjustments:

- to recognise roads to hydro power stations, wind farms, grain bins and areas of mining exploration where reliable national spatial data are available and where it is appropriate to do so
- to include the specific connections raised in State submissions if they meet the algorithm criteria.

105 The Commission notes that the rural road length estimates need to undergo further checking.

106 For further information regarding the assessment of rural road length, see the supplementary information attachment to the draft report, available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

Unsealed rural roads

107 In the 2015 Review, the Commission applied a weight of 0.5 to unsealed roads to recognise the lower maintenance costs associated with these roads. The cost factor was derived by judgment using limited information provided by Western Australia.

108 Unsealed road length is a subset of the estimated rural road length. All roads classified as minor rural roads in the 2015 Review mapped road length were treated as unsealed roads. Victoria considered that this approach should be retained.

- 109 Western Australia raised concerns about the approach for measuring unsealed road length. It suggested that all roads could be treated as sealed because the road use measure recognises the lower use of these roads. This would also avoid policy neutrality concerns.
- 110 Other States did not comment on the assessment.
- 111 **Measurement of unsealed road length.** The Commission has reviewed the 2015 Review measure of unsealed roads and found that road classifications and the unsealed/sealed information in the PitneyBowes StreetPro dataset¹⁹ are not consistent across States. For example, nearly all roads in Queensland have been classified as sealed while this is not the case.
- 112 Unsealed/sealed information is also available from the State roads datasets but as this is limited to actual State road networks it cannot be applied to the complete assessed road network. Regardless, actual unsealed rural road length could not be used because it is, to some extent, influenced by State policies. However, the Commission acknowledges that State government decisions to seal roads largely depend on the location of the roads and their traffic volume.
- 113 The Commission has investigated the use of broad indicators but with little success. For example, the Commission has developed a measure of unsealed road lengths using the roads included in the assessed rural road network in remote and sparsely populated areas, excluding highways and freeways. The results are shown in Table 23. The measure appears to over-estimate significantly the length of unsealed roads, when compared to actuals.

Table 23 Measures of unsealed lane-kilometres

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	km	km	km	km	km	km	km	km	km
2015 Review	1 762	1 389	4 829	3 591	1 762	49	0	3 167	16 549
Actual unsealed using State data	612	230	4 058	891	17	210	331	-(a)	6 949
Unsealed using broad measure	258	0	9 429	4 488	2 318	179	0	6 560	23 232

(a) The Northern Territory's data did not allow for a measure of unsealed road length that consistently excluded local type roads for which the State maintained responsibility when the area became incorporated.

Source: Commission calculations using RouteFinder Links dataset and State roads spatial data.

¹⁹ The PitneyBowes StreetPro dataset is a similar dataset to that used by the consultants for the 2010 Review (and employed also in the 2015 Review), and compatible to an extent with the 'RouteFinder links' dataset used to calculate the rural road kilometres shown in Table 22.

- 114 **The relative cost of maintaining unsealed roads.** The Commission reviewed the 0.5 cost weight applied to unsealed roads. However, it could not find comprehensive information on the cost of maintaining sealed and unsealed rural roads in Australia.
- 115 The New South Wales Local Government Grants Commission's 2015-16 annual report shows that the maintenance cost per kilometre of sealed local roads is \$5 217 and unsealed local roads is \$2 047.²⁰ This implies that the maintenance cost of unsealed roads is about 40% of that of sealed roads.
- 116 The 2011 Queensland Local Government Grants Commission Methodology Review found that the maintenance cost of formed roads (unpaved roads with very low traffic volume) was 11% of that of sealed roads.²¹ However, Austroads in its 2012 publication *Improving Cost Allocation by Road Type* found that the cost of maintaining unsealed roads is mostly influenced by traffic volume. This means that the 11% ratio would arguably be higher for unsealed State roads, which would have higher traffic volume compared with unsealed local roads.
- 117 Tasmanian State Grants Commission data show that the cost per km per annum of maintaining rural sealed road is \$8 781 compared with \$6 828 for unsealed roads, implying a cost weight of 0.8 for unsealed roads.²²
- 118 In its submission, New South Wales said that, in New South Wales, the maintenance cost of unsealed roads is 13% of that of sealed roads.
- 119 The Commission notes the large variation in the cost ratios of unsealed and sealed roads ranging from 0.11 to 0.8.
- 120 **Conclusion.** The Commission concludes that in addition to there being insufficient information to reliably measure unsealed road length, there is uncertainty about the appropriate weight for the cost of maintaining such roads.
- 121 The Commission intends not to include an adjustment for unsealed road length as this length, and the associated cost weight, could not be reliably measured in a policy neutral way.
- 122 Table 24 shows the effect of the unsealed roads adjustment on the redistribution in the 2019 Update. The assessment is material only for the Northern Territory, although it is very material for that State. Removing the adjustment will increase the Northern Territory's assessed spending.

²⁰ These roads are in the rural/non-built up areas for which the relevant local council is financially responsible.

²¹ Queensland Local Government Grants Commission, *Information Paper 2011 – Methodology review: General Purpose Grant, Financial Assistance Grant*.

²² Tasmanian State Grants Commission, *2018-19 Financial Assistance Grant Data Tables*.

Table 24 Effect on the redistribution of incorporating unsealed road length in the 2019 Update

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	36	15	-12	-10	-2	6	0	-31	56
\$ per capita	5	2	-2	-4	-1	11	0	-127	2

Source: Commission calculation, 2019 Update.

Urban road length

123 In the 2015 Review, urban areas were defined as UCLs with a population over 40 000 because the same definition is used in the ABS' SMVU and by the NTC to collect expense data for urban areas.

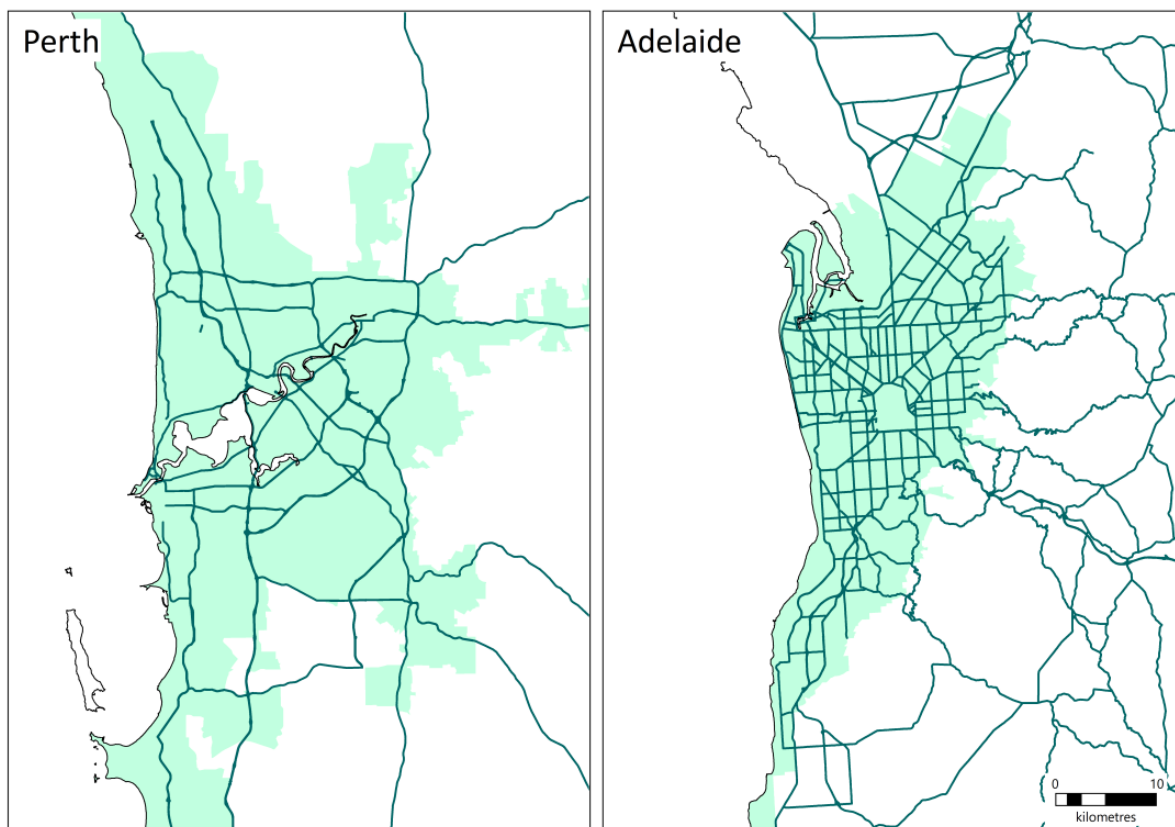
124 The 2015 Review assessment used population in UCLs of 40 000 or more as a proxy measure for urban road length. The Commission considered a number of options for measuring urban road length:

- State actual lane-kilometres from the Austroads standard
- adjustment to the State actual urban road network according to the approach described in the rural road length section
- use of the length of roads identified by the rural road algorithm that were excluded from the measure because they were in urban areas
- roads routed between city suburbs according to a variety of parameters
- as the fallback option, retain the current population proxy measure.

125 The Commission has decided to retain the current definition of urban area as UCLs with a population of greater than 40 000 people as this definition most closely correlates with those used by the ABS' SMVU and the NTC. States supported this proposal or did not comment.

126 While many States supported the use of adjusted actual road length, the approaches based on actual road length were not feasible because substantial judgment would be required in the absence of a national road classification standard (whether from Austroads or elsewhere) and given significant differences in States' own road classifications. For example, Figure 1 shows that Western Australia tends to classify less of its capital city roads as State roads than does South Australia. Using actual road length or making adjustments to actual State urban road networks to obtain policy neutrality would require substantial judgment.

Figure 1 Actual State road network in Perth and Adelaide



Note: The scale is the same across both these maps.

Source: State provided roads spatial data.

127 In developing the rural road network algorithm, some key roads within urban centres were identified and subsequently removed from the calculation of rural road lengths. The Commission considered using these deleted roads as a measure of urban road length needs. However, an inspection of these roads compared with the actual State roads showed that this method tends to miss too many State type roads in the largest urban centres. As a result, State shares of these road lengths differ significantly from actual State road shares, as shown in Table 25.

Table 25 State actual urban road kilometres and urban road length, as removed from the assessed rural road network

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	km	km	km	km	km	km	km	km	km
Actual urban length	4 526	4 228	2 822	1 207	1 100	228	426	156	14 693
Urban length removed from rural network	1 943	2 019	1 946	1 264	335	258	153	79	7 998
	%	%	%	%	%	%	%	%	%
Actual urban length	30.8	28.8	19.2	8.2	7.5	1.6	2.9	1.1	100.0
Urban length removed from rural network	24.3	25.2	24.3	15.8	4.2	3.2	1.9	1.0	100.0

Source: State road spatial data and Commission calculations using RouteFinder Links dataset.

128 Urban road length was also estimated using routing methods similar to that outlined in the rural road length section but with connections between suburb locations²³ rather than UCLs. Again, this measure was found to routinely miss many State-type roads in urban centres. It also included many local type roads. There was no discernible relationship with State actual urban road length. As a result, this method was not pursued further.

129 The Commission has decided to retain urban population as the measure of urban road length needs because it is unable to find a reliable and policy neutral alternative. While many States supported the approach of using actual road length, it was not possible.

Local roads

130 In the 2015 Review, local roads expenses were assessed as a separate component of the Roads category based on the length of minor roads in sparsely settled areas.²⁴ These expenses were previously understood to relate to the need for States to maintain local roads in areas where there is no local government (unincorporated areas) or where there is insufficient population for the local government to support road maintenance. These categories are defined by the NTC as:

- H3: spending on local access roads in unincorporated areas
- H4: direct spending on council managed local access roads
- H5: any other direct State spending on local access roads.

131 Only H3 spending belongs unequivocally in the local roads component. In the case of H4 and H5 expenses, it is not clear if the spending relates to local government roads in sparsely populated areas. Table 26 shows that the combined State spending (H3,

²³ These suburb locations were included in the PitneyBowes StreetPro dataset.

²⁴ Defined as remote and very remote regions with a population density of less than 1 person per 100 square kilometres

H4 and H5) in 2017-18 was \$346 million. Of this, only \$11 million was classified under H3. The two main expense items were Western Australia's H4 spending (\$150 million) and Queensland's H5 spending (\$77 million).

Table 26 NTC local roads expenditure under the H3, H4 and H5 categories, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
H3	3	0	0	2	0	0	0	6	11
H4	25	18	0	150	26	11	0	0	230
H5	0	2	77	3	0	0	0	23	105
Total	28	20	77	155	26	11	0	30	346
	%	%	%	%	%	%	%	%	%
H3	30.0	0.0	0.0	15.3	0.0	0.0	0.0	54.7	100.0
H4	10.9	7.6	0.0	65.5	11.2	4.8	0.0	0.0	100.0
H5	0.0	2.0	73.0	2.9	0.0	0.0	0.0	22.2	100.0
Total	8.2	5.7	22.2	44.8	7.4	3.2	0.0	8.6	100.0

Source: National Transport Commission expenditure data, 2017-18.

- 132 States were asked for information on the nature of the spending reported against NTC categories H3, H4 and H5.
- 133 The information from States indicates that only a small portion of spending reported against H3, H4 and H5 categories, primarily that of the Northern Territory, relate to the maintenance of local roads in unincorporated areas, or in local government areas where there is insufficient population for local governments to support road maintenance. There may also be some spending in Western Australia and South Australia.
- 134 Given this, the Commission considers that the vast majority of the expenses in the current local roads component do not relate to funding for local roads in areas of States where there is no local government (unincorporated areas) or where there is insufficient population for the local government to support road maintenance.
- 135 State spending classified to the H3 category and, for the Northern Territory, to the H5 category in 2017-18 was \$34 million, similar to that of previous years (\$27 million in 2015-16 and \$36 million in 2016-17). For the 2015 Review local roads assessment to be material at \$35 per capita for one State, total State spending would need to be almost \$90 million. At the current level of spending, the Northern Territory has the highest per capita redistribution with about \$14 per capita. Therefore, the Commission intends to reallocate H3, H4 and H5 spending proportionately across the rural and urban road subcomponents.
- 136 Queensland and the Northern Territory supported reallocation of all spending on local roads should the local roads assessment become immaterial. However, Queensland considered these expenses should be allocated to the rural road length

sub-component and the Northern Territory considered they should be allocated across the rural roads component.

- 137 South Australia, Tasmania and the ACT supported the reallocation of spending on local roads that did not relate to roads in unincorporated or sparsely populated areas.
- 138 The Commission considers that this reallocation of H3, H4 and H5 expenses proportionately across rural and urban road subcomponents appropriately recognises State needs. The Northern Territory is the only State with substantial per capita spending on local roads in unincorporated and sparsely populated areas. Its relative rural road length needs are similar to those of the 2015 Review local roads assessment. A local roads assessment applied only to these expenses is not material.
- 139 Western Australia said the Commission should retain all the current expenses in the local roads assessment. However, it is clear from information provided by Western Australia that most of the State expenses on local roads are not spent in areas of the State where there is no local government (unincorporated areas) or where there is insufficient population for the local government to support road maintenance. Western Australia's rationale for assessing all H4 and H5 spending in local roads related to the inadequacy of Commonwealth local roads funding. It said local road grants tend to go to non-urban councils with the greatest needs, which forces the State to provide additional funding for local roads in urban areas.
- 140 The Commission disagrees that the local roads assessment should be retained to address a possible inadequacy in Commonwealth funding for local governments.

Road use measures

Traffic volume

- 141 In the 2015 Review, the traffic volume assessment used data on traffic volumes (measured as total vehicle kilometres travelled (VKT)) in urban and rural areas obtained from BITRE.
- 142 The BITRE traffic volume data are themselves based on the ABS' SMVU. BITRE adjusts the SMVU data and smooths it using averages from several survey years. BITRE also make adjustments to remove data relating to travel on local roads and to split the data between travel on urban and rural roads (allowing for their separate assessment).
- 143 The Commission has decided to retain the 2015 Review assessment of traffic volume. South Australia, Tasmania and the Northern Territory supported the current methodology for calculating urban and rural traffic volume. No other States commented.

Heavy vehicle traffic volume

144 In the 2015 Review, heavy vehicle use was measured for four classes of heavy vehicles based on their weight and number of axles.

145 The Commission considered:

- combining light commercial vehicles with passenger vehicles, instead of heavy vehicles, because light commercial vehicles did not match the definition of heavy vehicles
- reducing the number of heavy vehicle classes by combining the previously separate rigid and other trucks, and buses groupings.

146 Table 27 shows the proposed new classes of vehicles and trend average gross mass (AGM) for each class.

Table 27 Trend average gross mass by aggregated BITRE vehicle class

	Trend AGM
	Tonnes
2020 Review	
Light vehicles	—
Articulated trucks	42.7
Other heavy vehicles	8.9
2015 Review	
Passenger vehicles	—
Light commercial vehicles	1.9
Articulated trucks	42.7
Rigid and other trucks	8.7
Buses	9.9

Source: National Transport Commission data.

147 **Light vehicles.** The Commission has decided to combine light commercial vehicles with passenger vehicles. The NTC data in Table 27 shows the average weight of vehicles classified as light commercial vehicles is 1.9 tonnes, which is not that dissimilar to many vehicles classified as passenger vehicles (such as large cars, 4WDs and passenger vans) and well below the 4.5 tonne threshold for heavy vehicles as defined by the NTC.

148 Under the NTC methodology, the weight of light commercial vehicles would not be considered sufficient to cause wear and tear on roads sealed or otherwise.²⁵ The Commission does not agree with Victoria and the Northern Territory that light commercial vehicles are not sufficiently similar to passenger vehicles.

²⁵ National Transport Commission (2014). *2014 Heavy Vehicle Charges Determination*. p. xv.

- 149 ***Classes of heavy vehicles.*** The Commission has decided to combine buses with rigid and other trucks because their trend AGM are very similar. Victoria, Western Australia, South Australia, Tasmania and the ACT support this.
- 150 This simplification does not come at the cost of fiscal equalisation, as argued by the Northern Territory, because the change is not material at \$10 per capita for data adjustments.
- 151 The Commission notes Western Australia's argument about its higher than average proportion of very heavy vehicle use, such as road trains. However, the Commission does not have the information necessary to assess the effect of separating very heavy vehicles such as road trains from articulated trucks. BITRE considers that its vehicle kilometres travelled data cannot reliably be disaggregated to the level required for an adjustment to be made. In any case, it appears that the higher use from this class of heavier articulated trucks is the result of State policies. Furthermore, Western Australia receives contributions from mining companies to offset higher maintenance costs.²⁶

Other issues

- 152 The ACT reiterated its view that the Commission should investigate whether a relationship exists between urban density and roads expenditure. The Commission considers that the ACT has not established a conceptual case for the issue to be pursued.
- 153 New South Wales also considered that the assessed cost of maintaining the urban road network should reflect differential costs arising from congestion in urban areas. However, the Commission considers that traffic volume and heavy vehicle use would capture a large proportion, if not all, of the effect of congestion on the cost of maintaining urban roads. There would be the possibility of double counting needs if a measure of congestion was introduced.

Bridges and tunnels

- 154 In the 2015 Review, expenses relating to bridges and tunnels were assessed on an EPC basis as data were not available to develop a reliable assessment of expenditure needs relating to bridges and tunnels.
- 155 For this review, the Commission has collected spatial data on State managed bridges and tunnels, with a view to developing an assessment of bridge and tunnel expenses. Most States supported this.
- 156 These data have been used to estimate the length of bridges and tunnels that are State-managed. Only structures exceeding four metres long were included to ensure

²⁶ Discussion of funding sources on Western Australia State visit.

comparability across datasets. Table 15 shows the calculated length of all such structures.

- 157 These measurements do not take into account differences in bridge and tunnel size and complexity. Given the variability in structure descriptions at this level of detail, it is not clear how such differences could be reliably measured. The Commission could not measure lane-kilometres because not all State bridge and tunnel datasets included this information.
- 158 Culverts have not been incorporated into the measure of bridge and tunnel needs because the culvert data are not consistently recorded by the States or in the NTC data.
- 159 New South Wales said that bridge and tunnel infrastructure is significantly more expensive to build and maintain compared to an earthwork road formation. It estimates that a metre of bridge maintenance costs about 20 times that of a metre of road and that a metre of tunnel maintenance and operation costs about 35 times that of a road.
- 160 The Commission recognises that tunnels are more costly to maintain than bridges. At this stage, the Commission does not have reliable information to make a cost adjustment. This will be investigated prior to the final report. Further State information is welcome. However, considering the small amount of tunnel kilometres, it seems likely that a separate cost weight would not be material.
- 161 Western Australia did not support a bridge and tunnel factor as it said bridges and tunnels depend on geographic characteristics, and it considered that if the Commission includes needs relating to bridges and tunnels it should also assess other geographic specific needs but noted that this is not a viable option. It highlighted expenses relating to floodways and tropical cyclones as an example.
- 162 The Northern Territory said there does not appear to be clear policy neutral influences to account for differences in the size and complexity of bridges and tunnels or an easy way to measure the expense need.
- 163 The Commission has decided to measure bridge and tunnel needs using estimated actual State managed bridge and tunnels length. It considers that the number of bridges and tunnels are mostly driven by topological features such as waterways and, in some cases, changes in elevation. They are also due to safety issues and the complexity of the road networks. The numbers would not be significantly affected by policy influences. The number and length of bridges are separate from other geographic and climatic factors. Previous attempts to measure these influences have proven difficult. The Commission considers that including a bridges and tunnels disability improves the assessment.

164 These measurements do not result in a material assessment for bridge and tunnel maintenance expenses. However, the assessment is material when this disability measure is applied to the Investment assessment.

Other services expenses

165 Other roads services cover expenses on corporate services, vehicle registration and driver licensing (NTC category G expenses). These expenses were assessed EPC in the 2015 Review because a simple and material assessment could not be identified.

166 The Commission has decided to reallocate roads corporate services, vehicle registration and driver licensing expenses to all roads components on a proportional basis. New South Wales, Victoria and the ACT did not support this approach. These States said there was no relationship between these expenses and the drivers of road maintenance expenses.

167 Reallocating other expenses will ensure that these expenses in the Roads category are treated in the same way as similar expenses in other categories. The Commission considers that expenses on corporate services and regulation are influenced by the same disabilities as those that affect service delivery expenses.

168 Other States agreed with the proposal or did not comment.

OTHER ISSUES CONSIDERED BY THE COMMISSION

169 There were a number of other issues considered by the Commission, largely in response to concerns raised by States. These issues related to the method for measuring existing disabilities or requests for new disabilities that were not included in the 2015 Review assessment. The main reasons for not assessing certain disabilities identified by States are:

- the conceptual case for a disability has not been established
- an assessment would not be material, that is, redistribute more than \$35 per capita for any State²⁷
- data are not available to make a reliable assessment.

Physical environment

170 Evidence shows that the physical environment does affect the cost of roads maintenance. However, the impact has proven difficult to measure. For example, a

²⁷ The Commission has set a materiality threshold for including a disability. A disability assessment must redistribute more than \$35 per capita away from an equal per capita assessment for any State to be included. The materiality test applies to the total impact the disability has on the redistribution of funds across all revenue or expense categories in which it is assessed.

consultant employed by the Commission during the 2015 Review was unable to develop a measure of needs that would capture all the relevant physical environment influences. However, the inclusion of the Rawlinson’s index in the investment assessment provides some recognition of physical environment effects.

- 171 Queensland said that the Commission should further consider and employ additional methods, expert advice or data (including State provided data) in arriving at a differential assessment for physical environment expenses.
- 172 The Northern Territory said that the consultant’s report provides a sound basis for the development of a physical environment disability.
- 173 The Commission notes that the measure developed by the consultant in the 2015 Review could not capture all the relevant physical environment influences and considers that further attempts at measuring the impact of physical environment are not likely to deliver an improved outcome. As a result, the Commission did not pursue this issue in the 2020 Review.

REDISTRIBUTION FROM AN EPC ASSESSMENT

174 Table 28 shows the extent to which the roads assessment for this category differs from an EPC assessment of roads expenses. States with a positive redistribution are assessed to have above average spending requirements and States with a negative redistribution are assessed to have below average spending requirements. In per capita terms, Western Australia, the ACT and the Northern Territory experience the largest redistributions.

Table 28 Redistribution from an EPC assessment, Roads expenses, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	-185	-279	180	166	73	5	-65	105	529
\$ per capita	-23	-44	36	64	42	9	-156	427	21

Note: The redistribution is the difference from an EPC assessment of category expenses.

Source: Commission calculation.

- 175 The main reasons for these redistributions are the differences between States in the extent of their assessed rural road networks, urban populations, road use across both rural and urban roads and the extent of their bridges and tunnels.
- 176 The main reasons for the redistributions for each State are:
- New South Wales and Victoria have, in per capita terms, relatively small rural networks, lower rural traffic volume and rural heavy vehicle use. These disabilities are not outweighed by Victoria’s above average urban network (proxied by population) and urban traffic volume nor by the above average

urban heavy vehicle use in New South Wales. Consequently, both States are assessed to be able to provide road maintenance services at below average cost.

- Queensland, Western Australia, South Australia, Tasmania and the Northern Territory have above average rural networks, rural traffic volume and rural heavy vehicle use, leading to their above average assessed needs for delivering roads services. All but Western Australia and South Australia also have above average needs relating to bridges and tunnels.
- The ACT has a very small assessed rural network, and rural road use. It also has below average needs relating to urban heavy vehicle use. Consequently, it is assessed to be able to deliver roads services at below average cost.

177 Table 29 provides a summary of the main disabilities contributing to the redistribution from an EPC assessment for this category. While the redistribution of the bridge and tunnel maintenance expense assessment is not material, the bridge and tunnel investment assessment is material.

Table 29 Major reasons for the redistribution, Roads expenses, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Rural road length	-79	-127	49	63	24	6	-15	78	221
Rural traffic volume	-49	-72	25	48	60	11	-32	9	152
Rural heavy vehicle use	-38	-79	32	55	42	1	-22	8	139
Urban traffic volume	-26	29	26	0	-25	-4	8	-7	62
Other	6	-30	48	-1	-28	-9	-3	17	72
Total	-185	-279	180	166	73	5	-65	105	529

Note: The redistributions from an EPC assessment are illustrative. Disabilities may not add due to rounding.

Source: Commission calculation.

Roads investment

178 Table 30 shows the extent to which the assessment for this category differs from an EPC assessment of roads investment.

Table 30 Redistribution from an EPC assessment, Roads investment, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	-319	-401	342	155	-15	0	-42	279	777
\$ per capita	-40	-63	69	60	-8	0	-101	1 132	31

Note: The redistribution is the difference from an EPC assessment of category expenses.

UPDATING THE ASSESSMENT

179 As required by the terms of reference, the Commission will incorporate the latest available data in the assessment during the annual updates. This will allow the assessment to reflect changes in State circumstances.

- The Commission will update the following data annually or biennially:
 - NTC State expenses data used to weight disabilities (annually)
 - road use data from the BITRE (annually)
 - urban population used for the urban road length disability (annually)
 - urban-rural split, based on a six-year average of SMVU data (biennially).
- Some of the assessment data are not readily available on an annual basis, or remain stable over time. These data will not be updated during the review period:
 - the assessed rural road network and the data underlying this method
 - NTC heavy vehicle weights, which will only be updated if the NTC updates its heavy vehicle determinations
 - data on bridge and tunnel length.

OUTSTANDING ISSUES

180 The Commission is still seeking data from States to finalise this assessment.

- Further information is sought relating to the management and length of tunnels, the relative costs of bridge and tunnel maintenance, and feedback relating to the structures included in the measure of bridge and tunnel length.

181 The Commission has to complete further analysis to finalise this assessment.

- Some minor adjustments will be made to the assessed rural road network to:
 - recognise roads to hydro power stations, wind farms, areas of mining exploration and grain bins where reliable national spatial data are available and where it is appropriate to do so
 - include the specific connections raised in State submissions if they meet the algorithm criteria.

FURTHER CONSULTATION

182 Before the release of the final report by 28 February 2020, there will be opportunities for consultation on this assessment. For further information about this category, please contact Kathleen Morris at Kathleen.Morris@cg.gov.au.

ATTACHMENT 18

TRANSPORT

Summary of proposed changes to the 2015 Review methodology

- A new urban transport expenses assessment is introduced. It is a blended assessment of State shares of urban centre population and a model that measures urban transport needs through an assessment recognising the influence of population density, passenger numbers by mode of transport, the presence of ferry services, distance to work and topography to measure State urban transport needs.
- A new urban transport investment assessment is introduced. It is a blended assessment of State shares of the square of urban population and the model developed for the assessment of urban transport expenses.
- The Commission has included all ABS Significant Urban Areas (SUAs) as in the urban transport assessment, instead of only those with a population above 10 000.
- Non-urban transport expenses are assessed on an EPC basis.
- All student transport expenses are now included in the urban transport component.

- 1 This attachment contains the Commission’s draft proposals for the Transport category following consultation with the Commonwealth and States.

SERVICE OVERVIEW

- 2 State expenditure on transport was \$22.0 billion in 2017-18, representing 8.9% of total State expenditure (Table 1). State transport expenses (including depreciation) and net investment in transport infrastructure are assessed separately. State spending on this function comprises expenditure relating to bus (including school bus services), heavy and light rail (passenger and freight), ferry services, ports and other maritime related services, and air transport. It includes the cost of passenger concessions and State administration expenses. Any user charges or other revenue are netted off against recurrent expenditure.

- 3 For this assessment, the State sector includes general government agencies responsible for transport services and public non-financial corporations (PNFCs) responsible for urban public transport.
- 4 Roads expenditure are subject to a separate assessment (refer to Attachment 17).

Table 1 Transport expenditure by State, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Expenses (\$m)	6 757	4 745	2 525	1 094	552	92	91	56	15 911
Net investment (\$m)	3 281	2 589	120	-341	327	-4	21	65	6 058
Total expenditure (\$m)	10 037	7 334	2 645	753	879	88	112	121	21 969
Expenses (\$pc)	853	743	509	424	319	176	218	229	642
Net investment (\$pc)	414	405	24	-132	189	-8	51	263	245
Total expenditure (\$pc)	1 267	1 148	533	292	508	168	269	492	887
Proportion of total expenditure (%)	13.2	11.9	5.4	2.8	5.3	1.7	2.4	2.0	8.9

Note: Expenditure shown on a net basis. Investment excludes depreciation expenses.

Source: Commission calculation using State budget data.

- 5 Table 2 shows the share of State expenditure on transport from 2014-15 to 2017-18.

Table 2 Transport expenditure, 2014-15 to 2017-18

	2014-15	2015-16	2016-17	2017-18
Total expenditure (\$m)	17 382	17 876	22 955	21 969
Proportion of total expenditure (%)	8.4	8.3	9.8	8.9

Note: Expenditure shown on a net basis.

Source: Commission calculation using ABS Government Finance Statistics (GFS) and State budget data.

- 6 User charges were \$4.7 billion in 2017-18 and include mainly fare revenue from urban passenger transport. In this category, user charges are deducted from total category expenses so that the assessment only applies to net category expenses.

Table 3 Transport user charges, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Revenue (\$m)	1 532	383	765	497	106	13	25	3	3 324
Revenue (\$pc)	193	60	154	192	61	24	61	12	134

Note: User charges refer to revenue from the sale of goods and services classified in GFS to economic type framework (ETF) 112.

Source: Commission calculation using ABS GFS and State budget data. Estimates are preliminary.

State roles and responsibilities

- 7 States fund the following urban and non-urban services and infrastructure.
 - Rail passenger services.
 - Urban rail passenger services in the larger cities of Sydney, Melbourne, Brisbane, Perth and Adelaide. These include extensive underground rail in Sydney and Melbourne.
 - Non-urban rail passenger services in New South Wales, Victoria, Queensland and Western Australia.
 - Bus services in all capital cities and major urban centres in all States.
 - Light rail or tram services in Sydney, Melbourne, Adelaide, the Gold Coast and the ACT.
 - Coach services connecting regional centres with each other and the capital city in all States except the ACT. In New South Wales, Victoria and Queensland, these services may complement or replace rail services.
 - Ferry services in nearly all States.
- 8 Queensland, Western Australia, South Australia, Tasmania and the Northern Territory also subsidise air services in remote areas, to ensure access to essential services.
- 9 While States make the policies on services, fares and infrastructure, the services are actually delivered under contracts with State-owned statutory corporations, private sector service providers and, in a few cases, State departments or local governments.
- 10 States differ considerably in the way they provide urban transport services. In capital cities, States use a mix of direct general government provision, service delivery through public non-financial corporations (PNFCs) or contracting with private providers to deliver services. In Queensland, the Brisbane City Council operates bus services. In large regional centres, services are provided through PNFCs or private providers. In smaller centres, States generally provide services by contracting with private providers. However, the level of private provision is only significant in New South Wales and Victoria.
- 11 A mix of private providers and PNFCs operate non-urban services such as bus and rail passenger transport, rail freight and ports.

12 States fund concessions to certain groups of users, via reduced fares.

Commonwealth roles and responsibilities

13 The Commonwealth's primary role is as a funder of nationally significant infrastructure projects. Infrastructure Australia, which is an independent statutory body with a mandate to prioritise and progress nationally significant infrastructure, determines which nationally significant projects should be included on the *Infrastructure Priority List*.

14 Table 4 shows the main Commonwealth payments to the States for rail infrastructure in 2017-18. All payments are for capital purposes.

Table 4 Commonwealth payments to the States for Rail infrastructure, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Infrastructure investment program									
Rail investment - Perth									
Freight link infrastructure funding	0	0	0	513	0	0	0	0	513
Off-network - Rail	0	2	43	-4	178	3	0	0	221
Rail investment - Victorian regional rail revival program	0	33	0	0	0	0	0	0	33
Investment - Rail	0	0	3	0	0	13	0	0	16
Other	2	0	0	0	0	0	0	0	2
Total	2	36	46	509	178	15	0	0	785
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Total	0	6	9	197	103	29	0	0	32

Note: Table shows major payments only. Commonwealth Own Purpose Expenses (COPEs) are not included. Payments that the Commission treats as 'no impact' are included in the table.

Source: Commonwealth *Final Budget Outcome, 2017-18*.

15 Attachment 2 — Commonwealth payments provides the complete list of Commonwealth payments and their treatment.¹

CATEGORY STRUCTURE

16 The assessment of the transport expenses is undertaken in two components:²

¹ Most Commonwealth payments to the States affect the grant distribution but some do not. The Commission refers to payments that affect the grant distribution as 'impact' payments. For more information, see Attachment 2.

² The transport infrastructure assessment is discussed in a section below.

- urban transport
- non-urban transport.

17 Components allow different disability assessments to apply to sub-functions.

18 Table 5 shows the category's assessment structure, the size of each component and the disabilities that apply.

Table 5 Category structure, Transport, 2017-18

Component	Component expense	Disability	Influence measured by disability
	\$m		
Urban transport	14 891	Urban centre characteristics (weighted 75%)	Demand for and cost of providing urban transport, and city specific characteristics, using population-weighted density, the use and presence of a public transport mode, distance to work and topography.
		Urban population (weighted 25%)	The proportion of the State population living in urban centres.
		Wage costs	Recognises the differences in wage costs between States.
Non-urban transport	1 020	Equal per capita	This is an equal per capita assessment.
		Wage and regional costs	Recognises the differences in wage costs between States and in the cost of providing services to different areas within a State.

Source: Commission calculation using ABS GFS and State budget data.

Category and component expenses

19 The main data sources for calculating category and component expenses are ABS GFS and State budget data.³ The Commission produces consolidated general government sector and public non-financial corporation (PNFC) spending and investment on urban passenger.

³ Unless otherwise stated, category and component expenses for the first two assessment years are sourced from ABS GFS. States provide data for the most recent assessment year because GFS data are not available in time for the annual update.

ASSESSMENT APPROACH

Urban transport

- 20 Expenses for this component include consolidated operating expenses (including depreciation expenses) for the general government and PNFC sectors on passenger transport within urban centres, net of revenues.
- 21 The urban transport component is assessed using a blended approach that recognises:
- the proportion of State populations living in urban centres, with a weight of 25%
 - the effect of urban centre characteristics on the cost of providing urban transport, with a weight of 75%.

Urban population

- 22 The service population for urban transport services is the population living in urban centres. Table 6 shows the State shares of urban population.

Table 6 State urban population, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Urban population ('000)	6 757	5 559	4 066	2 251	1 428	347	415	155	20 978
Total population ('000)	7 921	6 386	4 964	2 584	1 728	525	416	247	24 770
Shares (%)	85.3	87.0	81.9	87.1	82.6	66.0	99.7	62.9	84.7

Note: The definition of urban population is in paragraph 08.

Source: Commission calculation using ABS estimated resident population (ERP) data.

Urban centre characteristics

- 23 The urban centre characteristics recognised in the urban transport assessment are the following:
- population density
 - numbers of public transport passengers (separately assessed for bus/light rail and heavy rail)
 - the presence of ferry services
 - distance to work
 - topography.

- 24 The effect of these urban centre characteristics on the cost of providing urban transport is measured through an econometric model, developed by consultants⁴ engaged by the Commission, specified as:

$$exp_i = \beta_0 + \beta_1 dense_i + \beta_2 dist_i + \beta_3 slope_i + \beta_4 \ln(pax_{i,train}) + \beta_5 \ln(pax_{i,bus+tram}) + \beta_6 D_{i,ferry}$$

- 25 The dependent variable (exp_i) is net per capita State expenses on public transport by urban centres. The explanatory variables are population-weighted density (PWD) ($dense_i$) to depict demand; distance to work ($dist_i$) to represent network complexity and the characteristics of individual urban centres; mean land slope ($slope_i$) to account for topography; the logarithm of passengers by public transport mode ($pax_{i,train}$), ($pax_{i,bus+tram}$) to represent mode availability (level of service) and congestion; and a dummy variable to indicate the presence or absence of a ferry service ($D_{i,ferry}$).

- Population density for each SUA is calculated as the sum of density of each Statistical Area Level 1 (SA1) weighted by the SA1 population share of the SUA. This measure is called a population weighted density.
- Passenger numbers are derived from the 2016 Census enumeration of persons by place of usual residence reporting their method of travel to work. Bus and light rail passenger numbers are combined in the model, reflecting that bus and light rail passengers represent economically similar drivers of supply or level of service.
 - While actual passenger numbers were used to derive the econometric model coefficients, modelled numbers were used to calculate assessed expenses.
 - The modelled numbers were derived using regression analysis by location of urban centres (major cities, inner regional or outer regional) and mode (bus/light rail and heavy rail).
- Distance to work is a derived data item based on the 2016 Census data. It is measured as the distance travelled (shortest path of the road network) between a person's mesh block of usual residence and mesh block of place of work.⁵
- Topography is measured by the average mean slope of the urban areas. The mean land slope data was generated from a spatial analysis process developed by Geoscience Australia using ArcGIS v.10.0 and Feature Manipulation Engine (FME) 2012.⁶

⁴ The consultants were Jacobs and Synergies Economic Consulting. Their stage 1 and stage 2 reports are available on the Commission's website.

⁵ Mesh blocks are the smallest geographical area defined by the ABS and form the building blocks for the larger regions of the *Australian Statistical Geography Standard*.

⁶ There is some outstanding work to validate and confirm the explanatory variable data, especially the modelled passenger numbers. Depending on the outcome of this work, this could result in some minor changes to the assessment results.

26 The conceptual case supporting the inclusion of these variables to explain expenses is discussed in the Assessment issues section below.

Definition of urban centres

27 The urban centres and their populations covered by this assessment are defined as the ABS Urban Centres/Localities (UCLs) contained within SUAs. While the definition of urban centres may not capture perfectly the population serviced by the urban transport networks, the Commission has adopted it because it is policy neutral. This was supported by the 2020 Review consultants in their stage 1 and 2 reports.

28 Based on the consultants’ findings, the Commission has treated Newcastle, Wollongong, the Central Coast, the Sunshine Coast, the Gold Coast and Geelong as separate urban centres, rather than amalgamating them with their capital cities. In addition, the Commission intends to treat the SUAs of:

- Gisborne-Macedon, Melton and Bacchus Marsh as part of Melbourne
- Yanchep as part of Perth.

29 The Commission has included all 106 SUAs in the urban transport assessment. The vast majority of SUAs have a population above 10 000 and the majority have public transport services.⁷

Calculating assessed expenses using the urban transport model

30 The coefficients for the model are presented in Table 7.

Table 7 Coefficient estimates for the urban transport model

	Coefficient
	no.
Intercept	-94.58
Population density (persons/sqkm)	0.06
Heavy rail passengers	19.12
Bus and light rail passengers	6.53
Mean slope	6.12
Distance to work	3.00
Ferry dummy variable	19.45

Source: Commission calculation.

31 For each urban centre, per capita assessed expenses are derived by multiplying the coefficients with the urban centre’s variable values and then summing the results.

⁷ The Mildura – Wentworth and Echuca – Moama SUAs are split between New South Wales and Victoria. On the New South Wales’ side, the population is below 10 000.

Assessed expenses for each State are then calculated as the sum of assessed per capita expenses for each urban centre multiplied by the urban centre’s population.

- 32 A minimum per capita net expense of \$10 is applied, in cases where the assessed per capita net expenses is less than that amount.

Regional costs

- 33 The Commission intends not to apply a separate regional costs factor to urban transport expenses because those costs are already captured in the econometric model, which includes urban centres in different remoteness areas.

Wage costs

- 34 Differences in wage costs between States have a differential effect on the cost of providing services. There is a general method for measuring the influence of wage costs in components where the disability applies. For a description of the method see Attachment 24 — Wages costs.

Component calculations

- 35 Table 8 shows the calculation of total assessed expenses for the component in 2017-18.

Table 8 Illustrative assessment, urban transport component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Urban centre characteristics (\$m) (75% weight)	4 499	3 202	1 696	1 012	595	47	91	27	11 168
Urban population (\$m) (25% weight)	1 199	986	722	399	253	61	74	28	3 723
Wage costs	1.006	1.004	0.996	0.993	0.975	0.971	1.048	1.030	1.000
Assessed expenses (\$m)	5 726	4 200	2 406	1 401	826	105	172	56	14 891
Assessed expenses (\$pc)	723	658	485	542	478	201	413	226	601

Source: Commission calculation.

Non-urban Transport

- 36 Non-urban transport expenses include capital and operating subsidies for passenger and freight transport.
- 37 The Commission intends to assess non-urban transport expenses EPC, except for regional and wage costs.

Regional costs

- 38 Differences in the cost of providing services to different regions within a State affect State expenses. Non-urban transport services are those provided outside urban centres. The greater distances in remote areas affect transport costs. A regional cost gradient cannot be readily measured, but the conceptual case for one is valid. As such, the Commission has retained the application of a general cost gradient to non-urban transport expenses. For a description of the method see Attachment 24 — Geography.
- 39 Victoria argued that the current regional costs factor may not be appropriate to apply to the non-urban transport assessment. Subsidy payments are likely to reflect the costs faced by regional operators, rather than costs faced by States in providing schools education and police services. It added that the factor is immaterial in this assessment.
- 40 The Commission acknowledges that it would be preferable to apply a non-urban transport specific regional cost gradient. However, in the absence of one, the Commission considers that a general cost gradient would capture regional costs reasonably well.
- 41 While the regional costs assessment may not be material in this component, it is material across all assessments. The Commission's usual approach is to assess a disability for a category or component if there is a conceptual case for it and if the disability is material across all assessments.

Wage costs

- 42 Differences in wage costs between States have a differential effect on the cost of providing services. There is a general method for measuring the influence of wage costs in components where the disability applies. For a description of the method see Attachment 24 — Wages costs.

Component calculations

- 43 Table 9 shows the calculation of total assessed expenses for the component in 2017-18.

Table 9 Illustrative assessment, non-urban transport component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Equal per capita (\$m)	326	263	204	106	71	22	17	10	1 020
Regional costs	0.993	0.991	1.005	1.012	1.006	1.014	0.988	1.155	1.000
Wage costs	1.006	1.004	0.996	0.993	0.975	0.971	1.048	1.030	1.000
Assessed expenses (\$m)	326	262	205	107	70	21	18	12	1 020
Assessed expenses (\$pc)	41	41	41	41	40	41	43	49	41

Source: Commission calculation.

CATEGORY CALCULATIONS

44 Table 10 brings the assessed expenses for each component together to derive the total assessed expenses for each State for the category. It shows at the component level how each disability assessment moves expenses away from an equal per capita (EPC) distribution to obtain assessed expenses.

Table 10 Illustrative category assessment, Transport, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Urban transport									
Equal per capita	601	601	601	601	601	601	601	601	601
Urban centre characteristics	117	51	-109	-59	-107	-361	-233	-343	0
Urban population	1	4	-5	4	-4	-33	27	-39	0
Wage costs	3	2	-2	-4	-15	-18	29	18	0
Assessed expenses	723	658	485	542	478	201	413	226	601
Non-urban transport									
Equal per capita	41	41	41	41	41	41	41	41	41
Regional costs	0	0	0	1	0	1	0	6	0
Wage costs	0	0	0	0	-1	-1	2	1	0
Assessed expenses	41	41	41	41	40	41	43	49	41
Total assessed expenses	764	699	526	584	518	241	456	275	642

Note: Table may not add due to interactions between disabilities and rounding.

Source: Commission calculation.

INFRASTRUCTURE ASSESSMENT

45 States require infrastructure to support service delivery. State infrastructure requirements are assessed in the Investment category. The main driver of investment in urban transport related infrastructure is growth in urban population. For non-urban transport infrastructure, the main driver is total population. In addition, the

service use disabilities that affect recurrent service delivery expenses also affect the quantity of infrastructure each State requires to provide the average level of service. In this category, this includes the urban centre characteristics and urban population disabilities. Interstate differences in construction costs are also recognised.

- 46 In this category, the Commission assesses infrastructure needs through a net investment assessment rather than a gross investment assessment. The urban transport model was developed using net expenses including depreciation, which means a gross investment assessment is not possible.
- 47 The urban transport investment assessment is a blended approach that recognises:
- The proportion of State populations living in urban centres through the population-squared model as used in the 2015 Review, with a weight of 25%. The 2015 Review model is used because it is based on asset data, which complements the 2020 Review recurrent model
 - The effect of urban centre characteristics on the cost of providing urban transport, with a weight of 75%.
- 48 Table 11 shows the State shares of the urban transport assessed closing stock for 2017-18.

Table 11 Illustrative assessment, urban transport shares of assessed stock, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	%	%	%	%	%	%	%	%	%
Squared urban population (25% weight)	39.7	39.9	10.1	7.0	2.9	0.1	0.3	0.0	100.0
Urban centre characteristics (75% weight)	40.3	28.7	15.2	9.1	5.3	0.4	0.8	0.2	100.0
Combined assessment	40.1	31.5	13.9	8.5	4.7	0.3	0.7	0.2	100.0

Source: Commission calculation.

- 49 Table 12 shows the calculation of total assessed expenses for investment in the urban transport component in 2017-18.

Table 12 Illustrative assessment, investment in urban transport components, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Assessed opening stock	38 910	30 315	13 467	8 385	4 650	329	662	184	96 902
Assessed closing stock	42 224	33 109	14 632	8 984	4 975	354	720	197	105 196
Assessed change in stock	3 314	2 795	1 165	599	326	25	58	13	8 294
Cost factor	1.016	0.981	0.976	1.034	0.995	0.979	1.046	1.123	1.000
Assessed investment	3 369	2 742	1 137	620	324	25	61	15	8 294

Note: The amounts in each line are redistributions from an EPC assessment.

Source: Commission calculation.

50 For a description of the urban and non-urban transport investment assessments, see Attachment 21 — Investment.

ASSESSMENT ISSUES

51 The 2015 Review assessments provided the starting point for the 2020 methodology review. In April 2018, Commission staff released a draft assessment paper setting out staff proposals for the Transport category. In addition, the consultants engaged by the Commission developed a model for assessing State urban transport needs. States provided submissions on the staff proposals and the consultants' reports. The staff proposals, consultants' reports and State submissions are available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

52 The main assessment issues for the category were:

- whether there is a sufficiently robust conceptual case to retain the general approach adopted in the 2015 and 2010 Reviews
- whether the models underpinning the urban transport expense and investment assessments can be improved
- the definition of urban centres
- the assessment of non-urban transport subsidies.

53 The treatment of Commonwealth payments for investment on the National Rail Network projects is discussed in Attachment 2 — Commonwealth payments.

54 The following sections discuss the main issues for the Transport category, including State views.⁸

URBAN TRANSPORT

The recurrent urban transport assessment

55 A priority for the Commission for the 2020 Review was to review the urban transport recurrent assessment. The assessment developed during the 2010 and 2015 Reviews used urban population as the main non-policy influenced driver of urban transport expenses.

56 Queensland, Western Australia, South Australia, Tasmania and the ACT expressed concerns with the proposition that urban population was the sole driver of expenses

⁸ State submissions often include significant detail and supporting evidence. In this attachment, the Commission responds to the arguments and evidence States presented in their submissions. For the full detail of State submissions, see the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

and did not support retaining the assessment for the 2020 Review. They noted that influences such as the presence of rail, population density and urban form/geography should be considered. States were also concerned about the theoretical foundation of the model. Similar concerns were raised about the urban transport investment assessment adopted in the 2015 Review.

- 57 To address these concerns and improve the urban transport assessments, the Commission engaged consultants (Jacobs Group, and subsequently Synergies) to develop a model that can be used to assess States' urban transport expenditure requirements.
- 58 After consideration of the consultants' recommended model and having engaged further with the consultants on various aspects of their report to validate its proposed approach, the Commission intends to adopt a model that measures urban public transport needs through the following influences:
- population density
 - number of public transport passengers (separately assessed for bus/light rail and heavy rail)
 - the presence of ferry services
 - distance to work
 - topography.⁹
- 59 A number of States, notably Victoria and Tasmania, were concerned that some variables, such as student numbers and income, were not included in the consultants' preferred model. The consultants have tested a range of variables, including the two mentioned above. Variables were not included when they did not improve the model. In any case, many of them were correlated with other variables included in the model and their effects on costs would, therefore, already be captured by the variables included in the model. Influences such as overseas visitors as raised by Victoria could not be modelled due to data unavailability.
- 60 **Population density.** This variable captures the demand for services. As such, it replaces urban population, which was used as the driver of needs in the 2015 Review. International literature shows that demand for public transport is expected to be higher in cities with high densities than in those with low densities. Population density is not only related to urban population but also to the surface area of urban centres. Surface area influences public transport demand in the following ways:
- The more dense an urban centre becomes, the higher the use of public transport gets because the use of private road vehicles tends to decline due to higher costs related to parking and heavy traffic conditions (congestion).

⁹ The consultants considered that the model could also be used to assess urban transport investment needs.

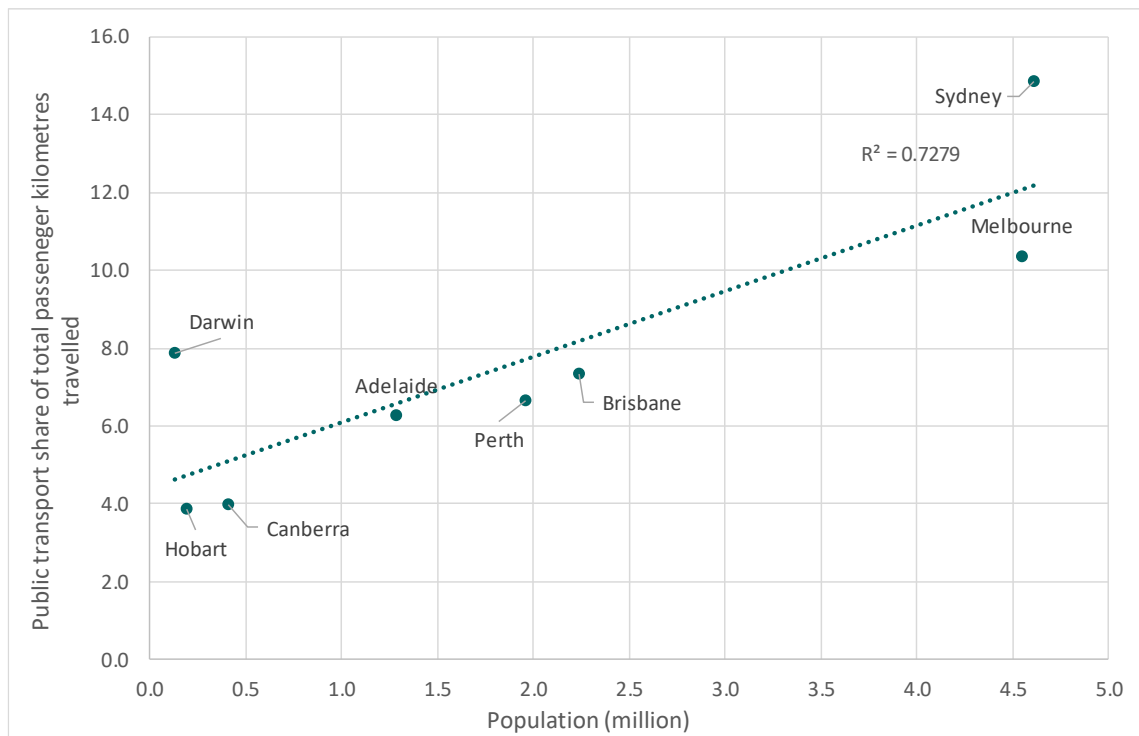
- The Australian experience shows that large urban sprawl encourages people to have their own private transport because accessibility to the public transport network is poorer and travel distances are longer. This reduces the use of public transport.^{10,11}

- 61 The relationship between population density and public transport use is reflected in the major cities' transport plans. For example, the *Plan Melbourne 2017 – 2050* states that high-density residential developments will be used to deliver more housing closer to public transport. The *South East Queensland Regional Plan 2017* states that 60% of population growth in south-east Queensland will be accommodated within existing urban areas and there would be a strong focus on concentrating the additional housing closer to public transport. The Perth METRONET program is seeking to support a more compact urban form that will make public transport use more viable.
- 62 There is evidence that, in the Australian context, population density is a better measure of demand for public transport than population. Figure 1 shows the relationship between the public transport share of total passenger kilometres travelled and population for the eight capital cities. While there is a good overall correlation, it appears that population size alone does not explain the difference in public transport use between Sydney and Melbourne. These two cities have similar population but markedly different use of public transport. Figure 2 shows the relationship with population density instead of population. The correlation is stronger (higher R squared) and population density explains better the difference in public transport use between Sydney and Melbourne.

¹⁰ Cihat Polat, 2012, *The Demand Determinants for urban Public Transport Services: A Review of Literature*. *Journal of Applied Sciences*, 12: 1211-1231.

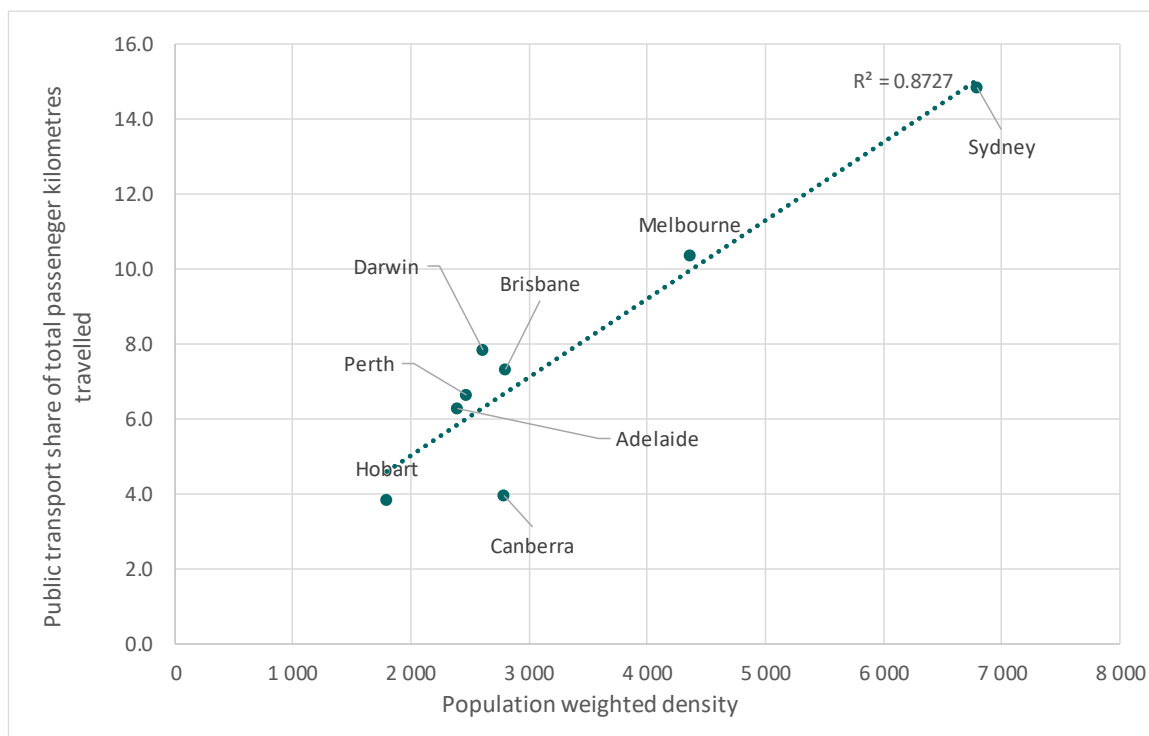
¹¹ https://infrastructureaustralia.gov.au/policy-publications/publications/files/4-Outer-Urban-Public-Transport-Policy-Paper_Chapter2_FA.pdf.

Figure 1 Relationship between public transport share of total passenger kilometres travelled and population, 2016-17



Source: Commission calculation based on BITRE and ABS data.

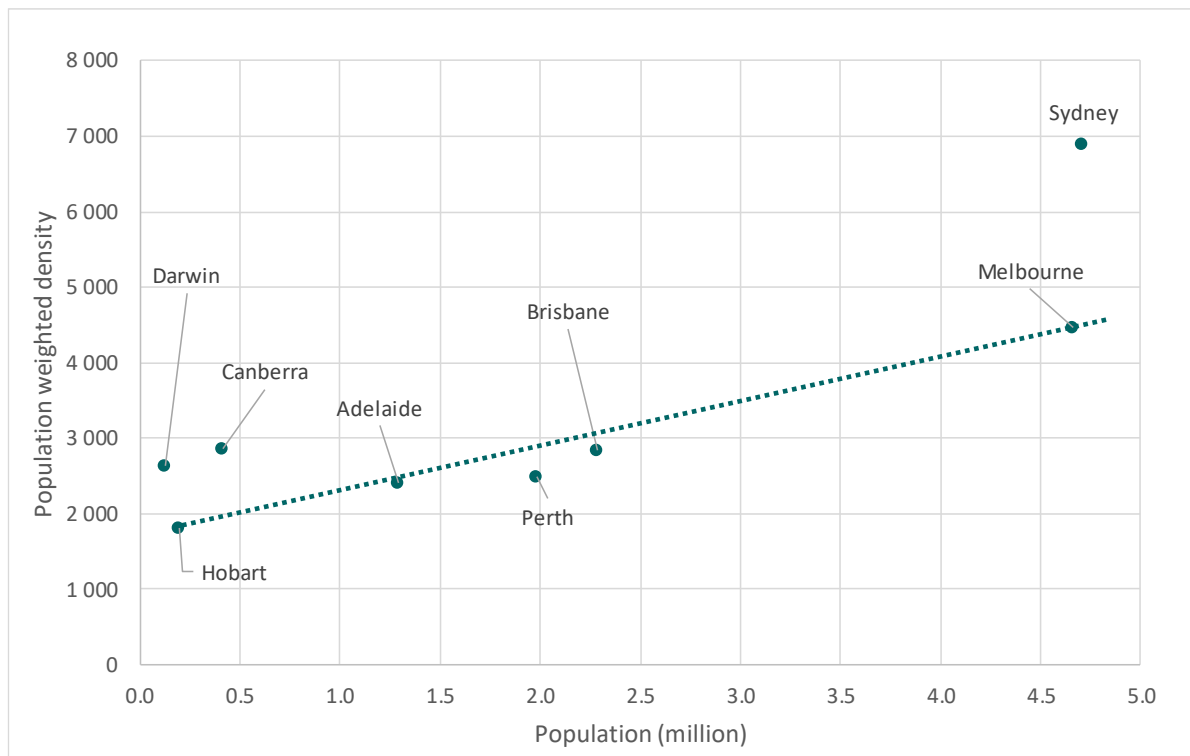
Figure 2 Relationship between public transport share of total passenger kilometres travelled and population density, 2016-17



Source: Commission calculation based on BITRE and ABS data.

- 63 Western Australia and South Australia expressed concern that population density is, to some extent, the result of State policies.
- 64 Figure 3 compares population density for the capital cities. It shows a strong relationship between population density and population for Melbourne, Brisbane, Perth, Adelaide and Hobart while Sydney, Darwin and Canberra are comparatively dense.

Figure 3 Population weighted density versus population, 2017-18



Source: Commission calculation using ABS data.

- 65 Sydney stands out as having a significantly higher population density than the other capital cities. New South Wales considered that Sydney's high population density was effectively the result of:
- topographical constraints and national parks that limit the availability of greenfield residential land
 - historical and current policies. New South Wales said that State governments are adopting policies that aim to minimise expenses associated with urban growth. It argued that, for some jurisdictions, cost minimisation may be achieved through urban sprawl while others may opt for more aggressive urban densification policies. In the case of Sydney, urban infill policies are a necessity due to geographic constraints and associated infrastructure costs.

- 66 A 2013 BITRE report¹² concluded that the four larger States had similar policies in terms of limiting urban sprawl for their capital cities and increasing population density in and around activity centres. The report noted that, between 2001 and 2011, rates of infill development in Perth have been well below the strategic plan targets, but Sydney, Melbourne and Brisbane have been tracking above their long-term infill targets. It added that the shift towards higher density forms of housing was most pronounced in Sydney.
- 67 Table 13 shows the population density and population growth for the capital cities between 2000-01 and 2017-18.

Table 13 Population weighted density and population growth for capital cities, 2000-01 to 2017-18

	Population weighted density 2000-01 Person/sqkm	Population weighted density 2017-18 Person/sqkm	Population growth 2000-01 to 2017-18 %	Density growth 2000-01 to 2017-18 %
Sydney	4 967	6 800	30	37
Melbourne	2 910	4 462	43	53
Brisbane	2 124	2 771	38	30
Perth	2 118	2 467	42	16
Adelaide	2 122	2 366	17	12
Hobart	1 646	1 703	18	3
Canberra	2 250	2 850	31	27
Darwin	2 052	2 523	34	23

Source: Commission calculation.

- 68 The rate of increase of population density gives some indication of longer-term urban densification strategies. Perth, for example, has exhibited strong population growth from 2000-01 to 2017-18, but weak growth in population density, suggesting policies (historical and/or current) that encouraged sprawling urban development. Sydney, in comparison, experienced a lower level of population growth but strong population density growth. This is consistent with BITRE findings, and suggests more aggressive urban densification strategies in Sydney than in Perth. Melbourne experienced similar population growth to Perth but the fastest density growth.
- 69 The Commission considers that Sydney's high population density relative to that of other capital cities is mainly due to non-policy influences and historical policies. Undoubtedly, Sydney's past and present policies have some level of influence. Nevertheless, Melbourne experienced the strongest growth in population density

¹² Bureau of Infrastructure, Transport and Regional Economics (BITRE), 2013, *Population growth, jobs growth and commuting flows—a comparison of Australia's four largest cities*, Report 142, Canberra ACT, Chapters 4 and 10.

between 2000-01 and 2017-18, not Sydney. Canberra and Darwin also experienced relatively strong growth.

- 70 Overall, the Commission considers that the majority of the differences in population density are due to circumstances outside current State control. There is not strong evidence that policies in Sydney have deviated significantly from other capital cities. This suggests that recent State government policies are influencing current levels of density only to a small degree. However, it is difficult to know to what extent the policies are influenced by circumstances outside or within State control. Even if policy influences were large enough to warrant adjustments, the Commission does not have the information necessary to make them.
- 71 South Australia argued that the relationship between cost recovery (revenue) and population density is not appropriately represented in the preferred model. The capacity to raise fare revenue is in fact taken into account in the econometric model because it uses expenses net of fare revenue.
- 72 Table 14 shows that Sydney has not only the highest population density of all capital cities but also the highest cost recovery level. A consultancy prepared for New South Wales concluded that among the capital cities, Sydney has the greatest capacity to raise fare revenue because of higher density and increased congestion.¹³

Table 14 Urban transport fare revenue as a proportion of total expenses, average of 2013-14 to 2015-16

	Sydney	Melbourne	Brisbane	Perth	Adelaide	Hobart	Canberra	Darwin
	%	%	%	%	%	%	%	%
Fare revenue as % of total gross expenses	39.4	12.5	27.9	24.1	23.7	34.9	23.9	14.9

Source: Commission calculation based on State data.

- 73 ***Passenger numbers and ferry services.*** Passenger numbers are used to capture the supply or level of public transport services, and also are proxies for congestion. Table 15 provides the shares of journey to work by public transport by urban centre population size. It shows that the use of public transport for commuting increases with urban centre size. The use of public transport in the five urban centres with a population over 1 million is significantly higher than those of smaller urban centres.

¹³ VLC Consultancy prepared for New South Wales Treasury, February 2019, page 1. The report is available on the Commission’s website. See also paragraphs 89 and 90.

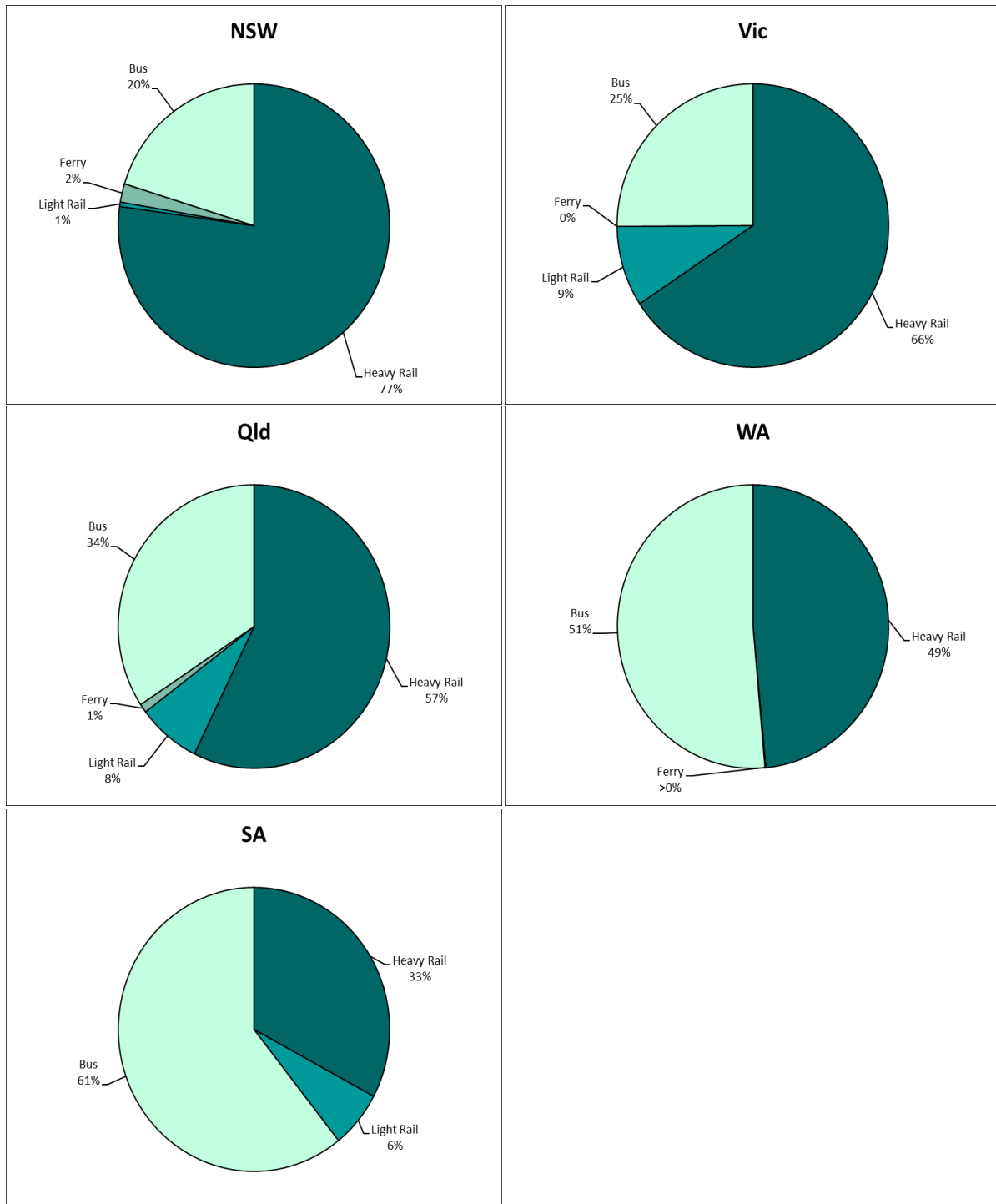
Table 15 Share of journey to work by public transport by urban centre size, 2016 Census

	> 1 million	0.25 to 1 million	0.1 to .25 million	0.05 to .1 million	< 0.05 million
	%	%	%	%	%
Share of journey to work by public transport	20.3	6.1	3.9	1.7	1.5

Source: Commission calculation based on 2016 Census.

- 74 In the consultants’ model, actual passenger numbers are included separately for heavy rail and bus/light rail services. This was done to account for the different cost structures and the fact that heavy rail passenger services are only provided in a small number of urban centres.
- 75 According to the expense data reported by States, urban heavy rail services are significantly more expensive on a per capita basis than bus and light rail services and net per capita expenses increase with jurisdiction size. The Commission considers that a jurisdiction installs a heavy rail network out of necessity to cope with increasing burdens on the transport system to both take passengers further outside the Central Business District (CBD) and increase mobility within an environment that is less conducive to private vehicle use. High per capita net expenses in cities with heavy rail reflects the fact that heavy rail networks are vastly more expensive to implement. Figure 4 presents urban transport expenses by transport mode for States with heavy rail.

Figure 4 Urban transport expenses by transport mode for States with heavy rail, average of 2013-14 to 2015-16



Source: 2020 Review State data return.

76 The Commission agrees with State arguments that passenger numbers are not policy neutral. For example, Queensland provided evidence that showed that State policies in regard to the level of subsidies (fare price) and concessions as well as policies to

improve the reliability, frequency and safety of the network can affect the number of passengers.

- 77 The Commission intends to use modelled passenger numbers for each urban centre using regression analysis instead of actual passenger numbers. The consultants supported this, but advised that using one regression model was not appropriate because the intensity of use of public transport is structurally different by city size and geographic area (that is, intensity of use is different for urban centres classified to major cities, inner and outer regional, and remote areas). The Commission has heeded their suggestion by using separate regression analysis that groups urban centres using the ABS remoteness classification.
- 78 In addition, the Commission was concerned that the consultants' model did not include light rail and ferry passengers. These passenger numbers had been left out of the consultants' preferred model because these two modes were only provided in a few urban centres. However, given the importance of light rail in Melbourne, and to ensure that all public transport modes are accounted for in the assessment, the Commission considers that these two modes should be included in the model. Based on advice from the consultants, the Commission is of the view that:
- light rail passenger numbers should be added to bus passenger numbers because they are close substitutes and the cost structure of these two services were sufficiently similar
 - ferries should be accounted for using a dummy variable rather than passenger numbers because the cost structure of this service differs significantly from that of other modes and many urban centres with waterways do not have ferry services.
- 79 **Distance to work.** Average distance to work was included to capture network complexity. Public transport costs increase with urban sprawl and distance. For example, larger cities, both in terms of population and geographical size, will require more complex multi-modal interchanges and bus route networks.
- 80 No State specifically commented on this variable.
- 81 **Topography.** Topography has affected the historical development of public transport modes and networks as well as the restructuring and expansion of current networks. For example, many rail lines today reflect the technical constraints on curves and gradients that existed when the line was first built, leaving many modern cities with a rail network that was spatially determined by the passenger needs of the mid-19th century. For bus services, networks are influenced by creeks, valleys, and rocky outcrops, creating discontinuous streets, one-way streets, and cul-de-sacs.
- 82 Topography also affects operating costs. In the case of rail, curves and gradients to overcome topographical features reduce operating speed, increasing travel time, affect passenger comfort and reduce patronage. In addition, topographically-difficult

terrain usually results in increased maintenance and operating costs. For bus services, bus stops are required at closer spacings in steeper areas or in areas with topographical barriers to ensure continuing coverage. Closer stops increase dwell time and reduce overall operating speed, increase total travel time and reduce patronage.¹⁴

- 83 Some States said that additional topographic variables should be investigated, such as waterways, soil type and mountains. The consultants found that including a variable to capture waterways did not improve the model. While the presence of mountains and the existence of different soil types may affect the cost of public transport provision, the Commission does not have the information to test their effects on costs.
- 84 **Economies of scale.** Several States raised concerns about the appropriate functional form of the model. Evidence from the literature suggested that the model should exhibit some economies of scale. However, given that most of the literature did not relate to the Australian public transport systems, the consultants considered that, to some extent, the functional form was an open question. The consultants were asked to test different functional forms, including those suggested by States, and concluded that the data showed the existence of economies of scale in the provision of both rail and bus services.
- 85 Western Australia argued that the consultants' work is based on the false assumption that per capita expenses increase with urban centre size. It provided data that showed passenger kilometre cost decreasing with population. The Commission does not agree that this is evidence that per capita costs should not increase with urban centre size. While the cost of a passenger kilometre may decrease with urban centre size, the overall transport task increases with urban centre size. This is because larger urban centres tend to have proportionally higher use of public transport (see Figure 1).
- 86 **Other State issues.** Western Australia argued for an EPC assessment of urban transport subsidies because policy and disability are entangled, there is no clear conceptual basis for a service standard or underlying disability, and international evidence provides no guidance. It argued that public transport is unlike remote area services because the former is the result of State policies and the latter due to an underlying need. The Commission disagrees. Similar to urban centres, settlement patterns outside major cities reflect a mix of policy and non-policy factors. Past and present government decisions about the level of subsidies for water and electricity services, the location and standard of rural road and rail services, land use and

¹⁴ Rhonda Daniels and Corinne Mulley, *Planning Public Transport Networks—The Neglected Influence of Topography*, *Journal of Public Transportation*, Vol. 15, No. 4, 2012. https://www.nctr.usf.edu/wp-content/uploads/2012/12/15.4_Daniels.pdf.

industry assistance (for example, agricultural irrigation) have affected where people and industry are located. The expenditure assessments recognise the cost disadvantages for providing services outside major cities and the cost advantages of major cities. The Commission considers it is appropriate to recognise any cost disadvantages associated with large cities that are largely due to non-policy influences. In the 10 years to 2017-18, the population in Australia's major cities grew by 21%. Growth in other ABS remoteness areas was 10%.¹⁵ The Commission cannot ignore the distribution of growth and its consequences for State budgets.

- 87 Western Australia also suggested that rail expenses should be assessed EPC because there are too few data points. The evidence strongly suggests that it costs significantly more on a per capita basis to provide public transport in major cities with heavy rail networks compared with smaller urban centres. The Commission would not achieve equalisation if it did not recognise the presence of relatively high cost heavy rail services in its assessments.
- 88 Western Australia warned the Commission that adopting a policy-centred rather than cost-centred assessment of urban transport expenses (for example, 'big cities choose to spend more on public transport than small cities') would have ramifications across many other Commission assessments, such as utility subsidies, economic development and mining revenues. It is a long standing practice for the Commission to base its assessments on what States do and average State policy. The Commission considers it is average policy to provide rail passenger transport in large urban centres, in the same way it is average policy for States with large remote areas to provide electricity subsidies. Observations from Australian and overseas cities show that the majority of larger cities have rail passenger transport.
- 89 Western Australia is concerned that the data used to build the preferred model are proxies too far detached from the true drivers of supply and demand as well as network characteristics. However, the consultants noted that proxies were used only where it was necessary because data were not available for the preferred measures in the required format. This being the case, detailed analysis of the proxy measures was carried out. The consultants consider that the supporting analysis in the stage 2 report helped to mitigate these concerns.
- The report demonstrates that variables that were not available in the required format (such as congestion, which was available only for capital cities), could be satisfactorily proxied by existing variables.
 - The report summarises the theoretical and qualitative arguments underpinning the use of proxies where necessary. The report explained carefully where and why it was necessary to depart from the use of ideal variables.

¹⁵ Regional Population Growth, Australia, 2017-18 (ABS cat. no. 3218.0).

- 90 The Commission’s decision to give a 25% weighting to urban population in the assessment reflects concerns with data limitations and the use of proxy data in the model. Queensland was concerned over the lack of contemporaneity of the census data. However, there are no alternative annual datasets. The fact that all the variables cannot be updated annually does not invalidate the consultants’ results. While there may be volatility from a step change in the model outcomes when the 2021 Census data become available, this issue would not be unique to the transport assessment.
- 91 In regard to Western Australia’s view that the use of one model is not appropriate for all urban centre sizes, the consultants noted that the presence or absence of a heavy rail network is considered in the recommended model such that its cost contribution is zero if a rail system is absent. In this way, the recommended model is already a simultaneous estimation of Western Australia’s ‘two model approach.’
- 92 ***New South Wales’ urban transport consultancy.*** New South Wales engaged its own consultant Veitch Lister Consultant (VLC) to review the Commission’s urban transport assessment and the work of the Commission’s consultants.¹⁶ The consultant generated separate cost and revenue models for the five largest capital cities using micro-data at ABS Statistical Area Level 2 (SA2). The New South Wales’ consultant’s findings broadly accord with those of the Commission’s consultants. It found that:
- the supply of public transport per capita in Sydney is approximately 33% higher than average, due to higher employment density and increased congestion
 - public transport productivity in Sydney is approximately 3.3% lower than average, which stems from lower bus/tram speeds, shorter bus/tram routes, and longer heavy rail routes
 - revenue per capita in Sydney is approximately 37% higher than average, because of higher density and increased congestion.
- 93 The New South Wales consultant found that Sydney and Melbourne were the only two large capital cities with above average urban transport needs. This is consistent with the results of the Commission’s urban transport model.

Addressing data limitations and the use of proxies

- 94 The Commission intends to adopt the consultants’ model with some modifications to improve policy neutrality and to ensure that all modes of transport are captured. It considers it an improvement on the 2015 Review assessment, which was based on urban population. However, the Commission remains concerned about data limitations, which have resulted in the use of proxies in the model. To address these

¹⁶ Veitch Lister Consulting (VLC), *CGC’s Recurrent Transport Assessment Methodology*, Final report, February 2019.

concerns, the Commission intends to assess urban transport expenses through an assessment that would blend:

- the econometric model that recognises the influence of urban centre characteristics on the cost of providing public transport (75% weight)
- an assessment based on State shares of the population living in urban centres (25% weight).

95 The population living in urban centres is the service population of urban transport. It is broad driver of needs and goes some way in capturing the size of the task.

Definition of urban centres

96 States generally supported defining urban centres included in the assessment and their populations using ABS Urban Centres/Localities (UCLs) contained within Significant Urban Areas (SUAs). While the definition of urban centres may not capture perfectly the population serviced by the urban transport networks, the Commission has adopted it because it is policy neutral. This was supported by the 2020 Review consultants in their stage 1 and stage 2 reports.

97 The Commission intends to treat Newcastle, Wollongong, the Central Coast, the Sunshine Coast, the Gold Coast and Geelong as separate cities, rather than amalgamating them with their capital cities based on the consultants' findings.

98 While States generally supported this approach, Queensland strongly opposed it. Queensland argued that satellite cities should be amalgamated with their capital city. This would more accurately reflect the State's true transport task and mitigate issues of the SUA dataset used to frame urban centres. It said that, for planning and policy purposes, South-East Queensland is considered a single region.

99 Queensland used 2016 census data on place of work by usual residence in Queensland to show that there were a significant number of people commuting to Brisbane from satellite cities, including by public transport.

100 In addition, Queensland opposed the definition of urban centres. It said that the current SUA boundary used to define urban centres causes inconsistent treatment of similar areas. It provided examples of areas (SA2s) within the Sydney SUA that have similar proportions of population commuting to the CBD as some SA2s within the Gold Coast SUA. Queensland concluded that some SA2s should be re-allocated from the Gold Coast SUA to the Brisbane SUA.

101 The consultants were specifically tasked to address the treatment of satellite cities. They started their investigation by noting that the ABS defines a SUA as follows:

The regions of the SUA structure are constructed from whole SA2s. They are clusters of one or more contiguous SA2s containing one or more related urban centres joined using the following criteria:

- they are in the same labour market
- they contain related urban centres where the edges of the urban centres are less than 5 km apart defined by road distance
- they have an aggregate urban population exceeding 10 000 persons
- at least one of the related urban centres has an urban population of 7 000 persons or more.¹⁷

102 The consultants concluded that the ABS has in effect already made some economic judgments about the relationship between SA2s when aggregating them to form SUAs. The question in their view was therefore whether any SUAs should be combined. That is, whether any SUAs should be considered as having a sufficiently integrated labour market with the neighbouring capital city.

103 The consultants considered that the best way to proceed was to apply criteria that assess if SUAs exist that could be considered labour market integrated satellites to a capital city. They constructed a suite of employment self-sufficiency indices. An SUA should be considered a satellite to a capital city if:

- it has a relatively high outside SUA dependency index value (that is, a high proportion of people working outside the SUA)
- it has a relatively high dependency to the capital city index value (that is, a high proportion of people working within the capital city SUA).

104 Figure 5 shows, for each SUA, the relationship between the proportion of the population employed outside the SUA and the proportion of the population employed within the capital city.

¹⁷ ABS cat 1270.0.55.004 - Australian Statistical Geography Standard (ASGS): Volume 4 - Significant Urban Areas, Urban Centres and Localities, Section of State.

Figure 5 Self-sufficiency indices for all SUAs, 2016



Source: Commission calculation based on estimates by the Commission’s consultants for the stage 2 report.

105 Figure 5 clearly shows the Gold Coast and the Sunshine Coast have greater degree of self-sufficiency than most large satellite cities. Based on the indices the consultants concluded that:

- Sydney’s surrounding SUAs are not satellites to Sydney and should be treated separately
- the SUAs of Gisborne-Macedon, Melton and Bacchus Marsh could be considered labour market integrated satellites to Melbourne based on their self-sufficiency index values
- Brisbane’s surrounding SUAs are not satellites to Brisbane and should be treated separately
- Yanchep should be considered a satellite to Perth.

106 The Commission considers the methodology used by the consultants to be robust and the supporting data reliable and intends to follow the consultants’ recommendations.

107 The Commission does not support re-allocating SA2s between SUAs. It would go against the judgment of the ABS in its construction of SUAs. The Commission accepts the ABS definitions of SUA as evidence-based and policy neutral. Re-allocating SA2s would amount to ‘cherry picking’ and it would be difficult to do so in a fair and reliable way. In addition, urban transport expenses would need to be re-allocated between SUAs, which would involve considerable additional judgment.

- 108 The Commission has included all SUAs in the urban transport assessment. This would increase the number of urban centres from 65 to 106¹⁸ compared with the 2015 Review assessment where only SUAs with population over 20 000 were included. The vast majority of SUAs have a population above 10 000 and the majority have public transport services.¹⁹ This change will better reflect what States do.
- 109 However, some States, notably Victoria and Queensland, could not provide financial data separately for all SUAs. As a result, the consultants used data for 70 SUAs in their econometric analysis. The consultants noted in the stage 2 report that the population of the SUAs omitted from the model represented only 3.8% of Australia's urban population. While the omission of any SUA from consideration in the modelling is not ideal, the consultants did not report any bias towards a particular State in an analysis of the model's residuals.
- 110 The consultants' analysis included rail expenses for the satellite cities of Sydney and Brisbane. Victoria argued that only rail expenses for the capital cities with this mode should have been used in the modelling because this service would only be economically feasible for capital cities where there are high passenger numbers.
- 111 The decision to include the five non-capital city SUAs' rail expenses reflects what States do. The number of stops in the satellite cities of Sydney and Brisbane suggest that these networks are complex enough to service a need other than regional transport. The data request sent to States sought data disaggregated to at least the SUA level. The Commission has not been able to consider the inclusion of Geelong, Ballarat and Bendigo in the modelling because Victoria was unable to provide the necessary expense data.

NON-URBAN TRANSPORT

- 112 The 2015 Review assessment of non-urban transport services was based on State shares of population outside capital cities.
- 113 Victoria, Queensland and the ACT asked the Commission to do more work to identify the material drivers of non-urban transport expenses. Victoria especially noted rail passenger and freight transport should be further investigated. The ACT suggested that the Commission consider factors like topography, population distribution and the distance of non-urban centres from urban centres. Western Australia argued for an EPC assessment because non-urban transport subsidies are determined by a large

¹⁸ The ABS defines 101 SUAs, but 5 of them are cross-border SUAs. The Commission splits these five SUAs to reflect their State location.

¹⁹ The Mildura – Wentworth and Echuca – Moama SUAs are split between New South Wales and Victoria. On the New South Wales' side, the population is below 10 000.

range of factors, many of which are dependent on State policies. Other States supported the retention of the 2015 Review assessment.

- 114 The Commission has reviewed the assessment and intends to assess non-urban transport expenses EPC.
- 115 Rail passenger services account for 71% of non-urban net transport expenses. Only the four most populous States have such expenses and they are concentrated in Victoria and Queensland, as shown in Table 16. This reflects that the three largest States, and to a lesser extent Western Australia, provide inter-city and regional train services. Therefore, the assessment should capture populations that are most likely to be serviced by non-urban passenger rail. In the 2015 Review, the Commission concluded that the population living outside capital cities broadly captures the size of the transport task. While this may appear a reasonable indicator, the assessment mainly moves GST away from Victoria. Victoria has significant non-urban rail passenger expenses because the provision of rail passenger services to its satellite cities are mainly classified as non-urban expenses, while similar expenses in New South Wales and Queensland are mainly classified as urban.

Table 16 Non-urban transport net expenses, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Rail passenger	117	590	333	16	0	0	0	0	1 056
Rail freight	47	0	34	8	0	8	0	0	97
Bus	0	0	59	34	5	14	0	0	112
Water transport	0	0	135	47	23	1	0	1	207
Air transport	0	0	0	5	0	1	0	7	13
Total	164	590	561	110	28	24	0	8	1 485

Source: State provided data and ABS GFS.

- 116 A reason for these different classifications of expenses would be that the satellite cities of Sydney and Brisbane are large, have many rail stations within their urban areas, and relatively few stations between the satellite cities and the capital city. In contrast, the satellite cities of Melbourne are smaller, have few stations within them and many in between them and Melbourne.
- 117 These three States appear to follow similar policies of providing commuter train connections to their satellite cities. Therefore, it becomes apparent that the current indicator of needs is not reasonable.
- 118 The Commission has investigated alternative policy neutral indicators but has been unable to find a more appropriate broad indicator that is material for the four most populous States.

119 In addition, the Commission was concerned that the 2015 Review assessment is material only for Tasmania and the ACT (\$36 per capita and \$52 per capita, respectively), which provide virtually no non-urban rail passenger services. The assessment is immaterial (less than \$35 per capita) for those States that incur the majority of expenses.

Student transport

120 The reliable identification of student transport expenses has been an on-going problem for a number of reviews. This is likely to be due to service delivery arrangements where expenses on student transport cannot be reliably separated from general public transport expenses. Further, in many urban centres, student transport is indistinguishable from general public transport.

121 In addition to the problem of identifying total student transport expenses, the Commission has no reliable information to split the expenses between urban and non-urban areas, although, given that 85% of the Australian population lives in urban areas (using the urban transport definition of urban area), it is reasonable to assume that the vast majority of the expenses would be in urban areas.

122 Therefore, the Commission is inclined to allocate all student transport expenses to the urban transport component and assess them with that component's disabilities.

123 A separate assessment of non-urban student transport expenses (assumed to be 15% of total expenses) based on the 2015 Review method is not material.

124 Queensland, Tasmania and the Northern Territory supported the retention of the 2015 Review assessment. However, the Commission does not consider that equalisation would be improved if a marginally material assessment based on unreliable data were retained.

125 The urban transport expense data by urban centre collected from States indicate that States mostly included student transport expenses in their urban transport returns and, therefore, the urban transport assessment would mostly capture student transport needs. The Commission considers that this is a better equalisation outcome than an EPC assessment, which was preferred by South Australia and the ACT.

INFRASTRUCTURE ASSESSMENT

126 The Commission intends to use the model developed for recurrent expenses to assess investment needs, as recommended by the consultants. The consultants concluded that the drivers of expenses and investment (demand for services and the level of services) were sufficiently similar to assess both using one model. They argued there

were too few observations to estimate an investment specific multi-variable model with confidence. No State disputed this conclusion.

- 127 As with the expense assessment, the Commission intends to implement a blended assessment for investment. However, instead of using an assessment based on urban population, the Commission intends to blend with an assessment based on the square of urban population, which is the simple population based model the Commission used for the 2015 Review.

DISABILITIES NOT ASSESSED IN THIS CATEGORY

- 128 The proposed assessment does not recognise all the disabilities affecting State costs or requested by States. The main reasons for not assessing these disabilities are discussed in earlier sections.

REDISTRIBUTION FROM AN EPC ASSESSMENT

Transport expenses

- 129 Table 17 shows the extent to which the assessment for this category differs from an EPC assessment of transport expenses. States with a positive redistribution are assessed to have above average spending requirements and States with a negative redistribution are assessed to have below average spending requirements. In per capita terms, the three smallest States experience the largest redistributions, with well below average needs for public urban transport.

Table 17 Redistribution from an EPC assessment, Transport expenses, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	964	359	-578	-152	-214	-211	-78	-91	1 323
\$ per capita	122	56	-116	-59	-124	-401	-186	-367	53

Note: The redistribution is the difference from an EPC assessment of category expenses. This redistribution is for transport expenses only. Table 19 shows the redistribution for the transport investment assessment.

Source: Commission calculation.

- 130 Table 18 provides a summary of the main disabilities contributing to the redistribution from an EPC assessment for this category.

Table 18 Major reasons for the redistribution, Transport expenses, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Urban centre characteristics	928	323	-542	-153	-184	-190	-97	-85	1 250
Wage costs	29	15	-13	-11	-28	-10	13	5	62
Urban population shares	9	27	-24	11	-6	-17	11	-10	58
Other	-2	-5	1	1	4	6	-4	-1	13
Total	964	359	-578	-152	-214	-211	-78	-91	1 323

Note: The redistributions from an EPC assessment are illustrative. Disabilities may not add due to rounding.

Source: Commission calculation.

131 The main reasons for these redistributions are the differences between States in the population size of the urban centres (especially the largest ones), the population density of these centres and the presence of rail passenger transport.

132 The main reasons for the redistributions for each State are the following:

- The size of the population of Sydney, its high population density and the presence of rail passenger transport have resulted in above average urban transport needs for New South Wales.
- The size of the population of Melbourne, its high population density (but lower than that of Sydney) and the presence of rail passenger transport have resulted in above average urban transport needs for Victoria.
- The lower population density of Brisbane relative to those of Sydney and Melbourne and the smaller proportion of the State population living in the capital city have resulted in below average urban transport needs for Queensland. These effects were partly offset by the cost of rail passenger transport in Brisbane.
- The lower population density of Perth relative to those of Sydney and Melbourne has resulted in below average urban transport needs for Western Australia. These effects were partly offset by the above average proportion of the State population living in the capital city.
- The lower population density of Adelaide relative to those of Sydney and Melbourne has resulted in below average urban transport needs for South Australia. These effects were partly offset by the cost of rail passenger transport in Adelaide.
- The small size of the population of Hobart, its low population density, the absence of rail passenger transport and the below average proportion of the population living in urban centres have resulted in below average urban transport needs for Tasmania.
- The small size of the population of Canberra, its relatively low population density and the absence of heavy rail passenger transport have resulted in

below average urban transport needs for the ACT. These effects were partly offset by an above average proportion of the population living in urban centres.

- The small size of the population of Darwin, its relatively low population density, the absence of heavy rail passenger transport and the smaller than average proportion of the population living in urban centres have resulted in below average urban transport needs for the Northern Territory.

Transport investment

133 Table 19 shows the extent to which the assessment for this category differs from an EPC assessment of transport investment.

Table 19 Redistribution from an EPC assessment, Transport investment, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	709	625	-513	-260	-257	-150	-80	-73	1 333
\$ per capita	89	98	-103	-101	-148	-286	-193	-296	54

Note: The redistribution is the difference from an EPC assessment of category expenses.

UPDATING THE ASSESSMENT

134 As required by the terms of reference, the Commission will incorporate the latest available data in the assessment during the annual updates. This will allow the assessment to reflect changes in State circumstances.

- The following data will be updated annually.
 - population of urban centres.
- The following data will be updated when the 2021 Census information becomes available.
 - population density
 - public transport passenger numbers
 - distance to work.
- Some of the assessment data are not readily available on an annual basis, or remain stable over time. These data will not be updated during the review period.
 - the coefficients derived from the econometric model for urban transport expenses
 - mean slope data.

OUTSTANDING ISSUES

135 From the Commission’s perspective, there are no outstanding issues for this assessment.

FURTHER CONSULTATION

136 Before the release of the final report by 28 February 2020, there will be opportunities for consultation on this assessment. For further information about this category, please contact Kathryn Conroy on kathryn.conroy@cgc.gov.au or Marc Boisseau on marc.boisseau@cgc.gov.au.

ATTACHMENT 19

SERVICES TO INDUSTRY

Summary of proposed changes to the 2015 Review methodology

- Mining regulation expenses are now assessed in a separate component.
- The assessment of major project expenses is discontinued.
- User charges has been deducted from regulation expenses for each industry.
- A single broad indicator has been adopted to assess agriculture and mining regulation respectively.
- Other industry regulation has been assessed using sector size (75%) and population (25%).

- 1 This attachment contains the Commission’s draft proposals for the Services to industry category following consultation with the Commonwealth and States.

SERVICE OVERVIEW

- 2 The Services to industry category comprises State expenses on the regulation and development of businesses and industries, and other economic affairs. Some spending relates to specific industries including agriculture, forestry, mining, manufacturing, tourism and construction. Other spending relates to all businesses, or to consumers.
 - Examples of regulatory functions include business registration, licensing of tradespeople, livestock identification schemes, chemical and pesticide regulation, building codes, energy market regulation, product safety, occupational health and safety, consumer protection, mine safety, employment conditions and shop trading hours.
 - Examples of business development activities include mineral exploration, geological mapping, agricultural irrigation systems, tourism and trade promotion, marketing, and industry research and development.
- 3 Table 1 shows State expenses on services to industry was \$5.8 billion in 2017-18, representing 2.7% of total State expenses.

Table 1 State expenses on Services to industry by State, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Total expenses (\$m)	1 713	1 240	972	776	546	254	27	272	5 799
Total expenses (\$pc)	216	194	196	301	316	484	64	1 101	234
Proportion of total operating expenses (%)	2.6	2.5	2.2	3.1	3.6	5.2	0.7	5.0	2.7

Note: Expenses shown on a net basis or total expenses less user charges.

Source: Commission calculation using State budget data.

- 4 While this category includes expenses related to a number of the regulatory functions performed by States, it does not include all State regulatory expenses. For example, expenses on health regulation are included in the Health category. Similarly, the business development expenses in this category do not include all State economic development expenses, or all mining related expenditure. These costs are spread across a number of expense categories including Post-secondary education, Services to communities, Other expenses and Investment.
- 5 Table 2 shows the category's level and share of State expenses from 2014-15 to 2017-18.

Table 2 State expenses on Services to industry, 2014-15 to 2017-18

	2014-15	2015-16	2016-17	2017-18
Total expenses (\$m)	4 565	4 573	5 400	5 799
Proportion of total operating expenses (%)	2.5	2.4	2.7	2.7

Note: Expenses shown on a net basis.

Source: Commission calculation using ABS Government Finance Statistics (GFS) and State budget data.

- 6 As seen in Table 3, user charges were around \$1.1 billion in 2017-18, equivalent to 14% of gross services to industry expenses.¹ In this category, user charges are deducted from total category expenses so that the assessment only applies to net expenses. User charges are revenue that arise from the discharge of regulatory functions including: licensing and permit fees; charges for soil, plant or animal testing; mine safety and site rehabilitation; chemical and pesticide regulation; and construction building regulations.

Table 3 Services to industry user charges, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Revenue (\$m)	175	137	305	233	103	38	38	29	1 059
Revenue (\$pc)	22	21	62	90	60	72	91	116	43

Note: User charges refer to revenue from the sale of goods and services classified in GFS to ETF 112.

Source: Commission calculation using ABS GFS and State budget data.

¹ Gross or total expenses include user charges.

State roles and responsibilities

Agriculture, forestry and fishing regulation

- 7 All States provide a similar range of services for their agriculture, forestry, fishing and hunting industries (collectively referred to as agriculture). The main agriculture regulation activities relate to:
- biosecurity
 - animal welfare
 - agriculture and veterinary chemicals
 - water resource management.

Mining regulation

- 8 Mining industry regulation is a State function and all States have arrangements in place to regulate mining exploration, production and rehabilitation. A high proportion of mining regulation costs are met through user charges and levies.

Other industries regulation

- 9 Other State regulatory responsibilities included in the Services to industry category are listed below. There are fees and charges associated with most of the following activities:
- business registrations
 - construction industry regulation
 - workplace health and safety regulation
 - industrial relations.

Business and industry development

- 10 All States engage in activities to promote employment and economic growth. Some programs target businesses, while others support particular industries or regions. Activities include investment and trade promotion, regional development programs, major project facilitation, skills development, job creation projects, funding for research and development and support for small businesses.
- 11 All States have a geological survey office, whose role is to support and promote exploration and land use planning. Most States offer mineral exploration grants to support the discovery of new resources and development of their mining industries.

Commonwealth roles and responsibilities

- 12 The Commonwealth provides funding to States for services to industry programs through National Partnership Payments (NPPs). Table 4 shows the main Commonwealth payments to the States for services to industry in 2017-18.

Table 4 Commonwealth payments to the States for Services to industry, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SA River Murray Sustainability (\$m)	0	0	0	0	25	0	0	0	25
Animal and plant pest and disease eradication (\$m)	0	0	4	0	0	20	0	0	24
Other NPPs (\$m)	3	12	4	4	1	0	0	1	25
Total (\$m)	3	12	7	4	26	20	0	0	73
Total (\$pc)	0	2	1	2	15	38	0	1	3

Note: The table shows major payments only. Commonwealth Own Purpose Expenses (COPEs) are not included. Payments that the Commission treats as 'no impact' are included in the table.

Source: Commonwealth *Final Budget Outcome, 2017-18*.

- 13 The complete list of Commonwealth payments and their treatment is available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).²
- 14 Apart from payments to the States, the Commonwealth also provides direct assistance to businesses, industry and local government. In principle, if these payments affect a State's fiscal capacity by relieving the State of a need to provide assistance, their effects should be included in the Commission's assessments. In practice, the interstate distribution of these payments is unknown and it would be difficult to determine how they affect State fiscal capacities. For these reasons, the Commission does not consider third party payments in the equalisation process.

CATEGORY STRUCTURE

- 15 The Services to industry category has four components:
- agriculture regulation
 - mining regulation
 - other industries regulation
 - business development.
- 16 Components allow different disability assessments to apply to sub-functions.

² Most Commonwealth payments to the States affect the grant distribution but some do not. The Commission refers to payments that affect the grant distribution as 'impact' payments. For more information, see Attachment 2 — Commonwealth payments.

17 Table 5 shows the category's assessment structure, the size of each component and the disabilities that apply.

Table 5 Category structure, Services to industry, 2017-18

Component	Component expense	Disability	Influence measured by disability
	\$m		
Agriculture regulation	659	Economic environment	Recognises the additional cost of providing regulatory services to the agricultural sector is determined by the level of economic activity in the sector
		Wage costs	Recognises the differences in wage costs between States
		Regional costs	Recognises the higher cost of providing services in more remote areas
Mining regulation	445	Economic environment	Recognises the additional cost of regulating the mining sector is determined by the level of economic activity in the sector
		Wage costs	Recognises the differences in wage costs between States
		Regional costs	Recognises the higher cost of providing services in more remote areas
Other industries regulation	1 758	Economic environment	Recognises the additional cost of regulating other industries is determined by the level of economic activity in the sector and population size
		Wage costs	Recognises the differences in wage costs between States
		Regional costs	Recognises the higher cost of providing services in more remote areas
Business development	2 937	EPC	This is an equal per capita (EPC) assessment. The driver of these expenses is State population
		Wage costs	Recognises the differences in wage costs between States

Note: Expenses shown on a net basis.

Source: Commission calculation.

Category and component expenses

18 The main data sources for calculating category and component expenses are ABS Government Finance Statistics (GFS) and State budget data.³

³ Unless otherwise stated, category and component expenses for the first two assessment years are sourced from ABS GFS. States provide data for the most recent assessment year because GFS data are not available in time.

- 19 The category also relies on State data to split GFS expenses by industry into these two broad functions — regulation and business development. This split is calculated using 2015-16 to 2017-18 State data, and will be applied in all updates using 2020 Review methods.
- 20 Expenses are allocated to components and sub-components in three steps.
- Total category expenses are allocated to industries using GFS data. There are three industry groups:⁴
 - agriculture, forestry and fishing
 - mining
 - other industries.
 - Industry expenses are classified as regulatory or business development based on State provided data.
 - Regulatory expenses may be split into sub-components based on the extent these are affected by the level of activity for the industry and population size.

ASSESSMENT APPROACH

- 21 The expenses in this category relate to two broad functions — regulation of businesses, and industries and business development. There are separate assessments for agriculture, mining and other industry regulation. There is a single component for all business development expenses, which are assessed equal per capita (EPC).

Agriculture regulation expenses

- 22 Regulation expenses are calculated by applying the agriculture regulation weight to total agriculture expenses sourced from GFS (see Table 13).

Economic environment

- 23 The assessment of agriculture regulation is based on sector size. It uses the value of agricultural output as the broad indicator of needs.

Regional costs

- 24 Differences in the cost of providing services to different regions within a State affects State regulation expenses. There is a general factor to measure the influence of

⁴ The industries were classified to include the following COFOG-A groups: agriculture — 0472 and 042; mining — 0474 and all 043 except 0435 electricity; and other industries — all other COFOG in division 04 economic affairs except 0435 electricity, 0451 and 0475 communication, and those allocated to agriculture and mining.

regional costs in components where the disability applies. See Attachment 25 – Geography, for a description of the calculation of this factor.

Wage costs

- 25 Differences in wage costs between States have a differential effect on the cost of providing services. There is a general method for measuring the influence of wage costs in components where the disability applies. For a description of the method, see Attachment 24 – Wage costs.

Data and method

- 26 The level of agricultural activity is calculated using agriculture, forestry and fishing factor income estimates sourced from the ABS publication, *Australian National Accounts: State Accounts*, cat. no. 5220.0.
- 27 Assessed expenses are calculated by applying State shares of factor income to total agriculture regulation expenses, then applying regional costs and wage costs factors.

Component calculations

- 28 Table 6 shows the calculation of assessed expenses for the component in 2017-18.

Table 6 Illustrative assessment, agriculture regulation component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Sector size (\$m)	152	144	156	88	71	38	0	10	659
Regional costs factor	0.992	0.990	1.005	1.024	1.006	1.009	0.988	1.133	1.000
Wage costs factor	1.005	1.003	0.997	0.995	0.980	0.977	1.038	1.024	1.000
Assessed expenses (\$m)	151	143	156	89	69	37	0	12	659
Assessed expenses (\$pc)	19	22	31	35	40	70	1	49	27

Source: Commission calculation.

Mining regulation

- 29 Regulation expenses are calculated by applying the mining regulation weight to total mining expenses sourced from GFS (see Table 13).

Economic environment

- 30 The assessment of mining regulation is based on sector size. It uses the value of mining output as the broad indicator of needs.

Regional costs and wage costs

- 31 The same approach is taken as for agriculture regulation.

Data and method

- 32 The level of mining activity is calculated using factor income estimates sourced from the ABS publication, *Australian National Accounts: State Accounts*, cat. no. 5220.0.
- 33 Assessed expenses are calculated by applying State shares of factor income from mining to total mining regulation expenses, then applying regional cost and wage cost factors.

Component calculations

- 34 Table 7 shows the calculation of assessed expenses for the component in 2017-18.

Table 7 Illustrative assessment, mining regulation component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Sector size (\$m)	61	12	111	233	11	4	0	12	445
Regional costs factor	0.992	0.990	1.005	1.024	1.006	1.009	0.988	1.133	1.000
Wage costs factor	1.005	1.003	0.997	0.995	0.980	0.977	1.038	1.024	1.000
Assessed expenses (\$m)	60	12	110	234	11	4	0	14	445
Assessed expenses (\$pc)	8	2	22	91	6	7	0	57	18

Source: Commission calculation.

Other industries regulation

- 35 Expenses for this component include spending on all other industries in the COFOG-A division 04 economic affairs, except those under agriculture and mining.⁵
- 36 Regulation expenses are calculated by applying the other industries regulation weight to total other industry expenses sourced from GFS (see Table 13).
- 37 Regulation expenses are further split 75:25 into these sub-components:
- expenses influenced by sector size
 - expenses influenced by population size.

Economic environment

- 38 The assessment of other industries regulation is based on sector size (75%) and population (25%).

Regional costs and wage costs

- 39 The same approach is taken as for agriculture regulation.

⁵ Also excluded are expenses on electricity as this is classified with the Services to communities category; and communication and research and development – communication, which are classified with the Other expenses category.

Data and method

- 40 The level of other industries activity is calculated using factor income estimates sourced from the ABS publication, *Australian National Accounts: State Accounts*, cat. no. 5220.0.
- 41 Assessed expenses has two sub-components:
- expenses influenced by the size of the sector — calculated based on State shares of other industries factor income
 - expenses influenced by population size — calculated based on State shares of population.
- 42 Regional costs and wage costs factors are applied to the sum of assessed expenses for the two sub-components.

Component calculations

- 43 Table 8 shows the calculation of assessed expenses for the component in 2017-18.

Table 8 Illustrative assessment, other industries regulation component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Economic environment (\$m)	597	444	330	189	109	31	34	24	1 758
Size of sector	457	331	242	143	79	22	27	19	1 319
Population	141	113	88	46	31	9	7	4	440
Regional costs factor	0.992	0.990	1.005	1.024	1.006	1.009	0.988	1.133	1.000
Wage costs factor	1.005	1.003	0.997	0.995	0.980	0.977	1.038	1.024	1.000
Assessed expenses (\$m)	595	441	330	192	108	31	35	28	1 758
Assessed expenses (\$pc)	75	69	67	74	62	58	84	111	71

Source: Commission calculation.

Business development

- 44 Expenses for this component include business development expenses for agriculture, mining and other industries. Business development expenses account for half of agriculture expenses, 43% of mining expenses and 20% of other industries (see Table 13).
- 45 Business development expenses are assessed EPC because population is considered the driver.

Regional costs

- 46 Western Australia said that regional cost factors should also be applied to business development expenses. However, since most business development functions are based in capital cities, the Commission decided not to apply regional cost disabilities.

Wage costs

47 Differences in wage costs between States have a differential effect on the cost of providing services. There is a general method for measuring the influence of wage costs in components where the disability applies. For a description of the method, see Attachment 24 — Wages costs.

Data and method

48 Assessed expenses are calculated by applying State population shares to total expenses, then applying the wage costs factors.

Component calculations

49 Table 9 shows the calculation of assessed expenses for the component in 2017-18.

Table 9 Illustrative assessment, business development component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
EPC (\$m)	939	757	588	306	205	62	49	29	2 937
Wage costs factor	1.005	1.003	0.997	0.995	0.980	0.977	1.038	1.024	1.000
Assessed expenses (\$m)	943	759	587	305	201	61	51	30	2 937
Assessed expenses (\$pc)	119	119	118	118	116	116	123	121	119

Source: Commission calculation.

CATEGORY CALCULATIONS

50 Table 10 brings the assessed expenses for each component together to derive total assessed expenses for each State for the category. It shows at the component level how the assessment of each disability moves expenses away from an EPC distribution to obtain assessed expenses.

Table 10 Illustrative category assessment, Services to industry, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Regulation of agriculture									
EPC	27	27	27	27	27	27	27	27	27
Sector size	-7	-4	5	7	14	45	-26	16	0
Wage costs	0	0	0	0	-1	-1	1	1	0
Regional costs	0	0	0	1	0	0	0	4	0
Assessed expenses	19	22	31	35	40	70	1	49	27
Regulation of mining									
EPC	18	18	18	18	18	18	18	18	18
Sector size	-10	-16	4	72	-11	-10	-18	32	0
Wage costs	0	0	0	0	0	0	1	0	0
Regional costs	0	0	0	0	0	0	0	2	0
Assessed expenses	8	2	22	91	6	7	0	57	18
Regulation of other industries									
EPC	71	71	71	71	71	71	71	71	71
Sector size	4	-1	-5	2	-8	-12	11	25	0
Wage costs	0	0	0	0	-1	-2	3	2	0
Regional costs	-1	-1	0	2	0	1	-1	9	0
Assessed expenses	75	69	67	74	62	58	84	111	71
Business development									
EPC	119	119	119	119	119	119	119	119	119
Wage costs	1	0	0	-1	-2	-3	5	3	0
Assessed expenses	119	119	118	118	116	116	123	121	119
Total assessed expenses	221	212	238	318	225	252	208	339	234

Note: Table may not add up due to interactions between disabilities and rounding. The EPC expenses and assessed expenses are total spending per capita. The amounts for each disability are redistributions from an EPC assessment.

Source: Commission calculation.

INFRASTRUCTURE ASSESSMENT

- 51 States require infrastructure to support service delivery. State infrastructure requirements are assessed in the Investment category. The main driver of investment in services to industry related infrastructure is growth in service population.
- 52 The service use disabilities that affect recurrent service delivery expenses also affect the quantity of infrastructure each State requires to provide the average level of service. In this category, the size of the agriculture, mining and other industries sectors, and population contribute to the capital stock factor.
- 53 Interstate differences in construction costs are also recognised.

54 For a description of the investment assessment, see Attachment 21 — Investment.

ASSESSMENT ISSUES

55 The 2015 Review assessments provided the starting point for the 2020 Review. In April 2018, Commission staff released a draft assessment paper setting out staff proposals for the Services to industry category. States provided submissions on the proposals. The staff proposals and State submissions are available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

56 The main assessment issues for the category are:

- the approach for estimating component expenses
- treatment of user charges
- whether to retain the EPC assessment of business development expenses
- disabilities for the assessment of regulation expenses
- whether to apply the regional costs disability to business development expenses
- adequacy of the administrative scale allowance for the category.

57 States were broadly supportive of recommendations in the services to industry draft assessment paper.

58 The following sections discuss the main issues for the category, including State views.⁶

Estimating component expenses

59 The assessment recognises that the drivers of regulation and business development expenses are different, and it is material to assess separately agriculture, mining and other industry regulation. GFS provides total expenses by industry but does not distinguish between regulation and business development expenses.

60 In the 2010 Review, State analysis of GFS unit record data provided the expense weights for regulation and business development within each industry. The same approach provided disability weights (for example, sector size and business count). Most States found the approach unreliable and they have consistently argued that there was significant judgment involved. The Commission retained the 2010 Review weights for the 2015 Review.

61 For the 2020 Review, the Commission has adopted a simpler approach that requires less data and judgment to determine regulation and business development weights.

⁶ State submissions often include significant detail and supporting evidence. In this attachment, the Commission respond to the arguments and evidence States presented in their submissions. For the full detail of State submissions, see the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

Only business development expenses were collected from States. Using these data and total industry expenses sourced from GFS, regulation expenses for each industry have been derived as a residual.

- 62 Table 11 shows the proportions of State spending on regulation and business development based on data collected in the 2010 and 2020 Reviews.

Table 11 Proportion of State spending on regulation and business development by industry, 2010 and 2020 Reviews

	2020 Review									2010 Review
	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ave	
	%	%	%	%	%	%	%	%	%	%
Agriculture										
Regulation	31	59	41	94	51	89	na	28	50	50
Business development	69	41	59	6	49	11	na	72	50	50
Other industries										
Regulation	61	na	55	63	62	19	75	46	57	37
Business development	39	na	45	37	38	81	25	54	43	63
Mining										
Regulation	64	83	82	82	76	52	na	74	80	na
Business development	36	17	18	18	24	48	na	26	20	na

Source: Commission calculation using State and GFS data.

- 63 Victoria, Queensland, South Australia, Tasmania, the ACT and the Northern Territory supported this approach. New South Wales made no comment.
- 64 Western Australia proposed a different approach. It said regression analysis could be used to determine the size of services to industry expenses driven by population, as opposed to activity indicators. Using agriculture data from the 2019 Update, Western Australia found that overall a regression approach better explained the variation in State expenses than the existing judgement based assessment.
- 65 The Commission notes that the population weights derived by Western Australia (54% for agriculture and 61% for other industries) are very similar to the new weights derived by the Commission using State data (50% and 57%, respectively). For this review, the Commission intends to use the new weights derived from State data.
- 66 The Commission considers that the 2020 Review approach for determining the proportions for business development and regulation is an improvement on the previous approach.

Mining regulation

- 67 States with large mining industries will face higher regulation costs. In the 2010 and 2015 Reviews, the Commission examined the materiality of a separate mining

regulation assessment, but concluded an assessment would not be material. Staff have retested the materiality of a separate assessment of mining regulation expenses using factor income for mining as the indicator of needs. Table 10 shows a mining regulation assessment would be material for Western Australia and the Northern Territory.

User charges

- 68 In the 2015 Review, only mining user charges were deducted from other industry regulation expenses. Agriculture and other industry user charges were assessed EPC. Analysis for the review showed that most user charges for this category relate to regulation functions rather than business development. Although States have different cost recovery policies, the Commission considers that sector size will determine the amount of revenue States could raise from regulation activities. The Commission intends to deduct user charges for all industries, not just mining.
- 69 Victoria, Queensland, South Australia, Tasmania, the ACT and the Northern Territory supported deducting user charges for all industries. New South Wales and Western Australia made no comment.

Business development disabilities

- 70 The Commission intends to retain an EPC assessment of business development expenses. The current EPC assessment is a deliberative EPC assessment, with population considered the driver of State spending.
- 71 Victoria, Queensland, South Australia, Tasmania and the ACT supported the proposal. New South Wales made no comment.
- 72 Western Australia proposed an assessment of assistance for existing industries using industry activity measures because assistance relates to export and private investment opportunities, and existing industry activity provides a guide to where these opportunities exist. It supported an EPC assessment for assistance to develop new industries.
- 73 In contrast, the Northern Territory said that States with a proportionately larger public sector workforce spend more on business development to facilitate the development of the private sector. Furthermore, States with high levels of private sector investment to facilitate growth and development may not require as much business development expenditure.
- 74 The views of Western Australia and the Northern Territory illustrate the challenge in conducting assessments for the Commission. Western Australia argued the presence of existing industries provides a partial guide to where business development opportunities are. The presence of an industry would indicate a level of comparative advantage that the State would want to leverage through its development policies. In

contrast, the Northern Territory argued the absence of a well-established private sector is a driver. Its economic development policies aim to attract new businesses and industries.

- 75 The arguments put by both Western Australia and the Northern Territory seem plausible, but neither State presented evidence that would allow the Commission to form a view on which circumstance results in a greater need for business development.
- 76 The Commission observes that all States have policies to develop their businesses, industries and regions. Some business development activities are broad and common across States, for example, tourism, trade and investment promotion, and business support. Other business development activities have a particular industry focus, for example, agriculture, mining, manufacturing, health or education. States have considerable discretion over the amount and types of programs that receive funding. The Commission considers that population remains the appropriate driver and intends to retain the EPC assessment of business development expenses.
- 77 The ACT said the Commission should recognise the impact of direct Commonwealth assistance to industry on State business development needs but did not suggest how to do this. In principle, these payments could affect a State's fiscal capacity by relieving it of the need to provide assistance. In practice, the interstate distribution of this assistance is unknown and it would be difficult to determine how these affect State fiscal capacities. For these reasons, the impact of direct Commonwealth assistance to industry is not included in the assessment.

Regulation disabilities

- 78 There is a conceptual case that the level of economic activity in a State, the number of businesses and population will affect the size of the regulation task.⁷ Victoria, Queensland, Tasmania, South Australia, the ACT and the Northern Territory supported this assessment. Table 12 shows the 2015 Review disabilities for each component and their weights.

⁷ For regulations that target consumers (for example, consumer protection), population is the appropriate driver.

Table 12 Disability weights, Services to industry, 2015 Review

Component	Disability	Weight (%)
Agriculture regulation	Farm factor income	16
	Business count	17
	Population	16
Agriculture business development	Population	51
		100
Other industries regulation (a)	Non-farm factor income	4
	Private non-dwelling construction	4
	Business count (b)	11
	Population	17
Other industries business development	Population	64
		100

(a) Mining was under 'other industry' in the 2015 Review.

(b) Business count data from States are not considered reliable and comparable. Population was used as a proxy for business counts in the 2010 and 2015 Reviews.

Source: Commission calculation, 2019 Update.

79 For the 2020 Review, the Commission intends to assess agriculture, mining and other industry regulation expenses using indicators reflecting the size of the regulation task. Analysis suggests that the value of production is a reasonable broad indicator of the size of the regulation task. A recent study by the Department of Industry, Innovation and Science found that business counts tend to be proportionate to the size of the economy, which suggests production measures alone could be used as a broad indicator for the regulation assessments.⁸

80 The current agriculture assessment uses agriculture business counts as one of the drivers of agriculture regulation. The Commission tested the materiality of using farm production as the single broad indicator for assessing agriculture regulation and found that the simpler assessment is not materially different to one that includes business counts. The current assessment of agriculture regulation gives some weight to population, because the approach used in the 2010 Review could not attribute all expenses to either sector size or the business count. This level of detail is not a feature of other category assessments.

81 In the 2020 Review, the Commission intends to assess all agriculture regulation expenses using the value of farm production, measured using factor income for the sector sourced from ABS publication, *Australian National Accounts: State Accounts*, Cat. No. 5220.0.

⁸ *The Business Size Distribution in Australia*, Research Paper 5/2015, Office of the Chief Economist, Department of Industry, Innovation and Science, September 2015.

- 82 A similar approach is proposed for other industry regulation, although the Commission intends to give population a weight because some regulations target consumers. To avoid a detailed data collection exercise, the Commission intends to use its judgment and give population a 25% weight.
- 83 Table 13 shows illustrative disability weights for the category, including mining as a separate regulation component.

Table 13 Illustrative disability weights, Services to industry, 2020 Review

Component	Disability	Weight (%)
Agriculture regulation	Sector size	50
Agriculture business development	Population	50
		100
Other industries regulation	Sector size	43
	Population	14
Other industries business development	Population	43
		100
Mining regulation	Sector size	80
Mining business development	Population	20
		100

Source: Commission calculation for 2020 Review.

- 84 **Major projects regulation.** In the 2015 Review, the Commission introduced an assessment of State spending on planning and regulation for major infrastructure projects. The assessment brought together expenses from a number of categories including Services to industry, Services to communities (for example, community development and environmental protection expenses) and Other expenses. The Commission accepted the conceptual case that States with high levels of private sector investment, including for mining, incur higher planning and regulation costs. Private non-dwelling construction expenditure was considered the appropriate non-policy indicator of State spending.
- 85 For the 2020 Review, staff collected data from States to update the expense estimate used in the assessment. A number of States have found it difficult to identify the relevant expenses. The estimates States provided were significantly less than the amounts reported for 2010-11 to 2012-13. The assessment is immaterial.
- 86 Given the difficulties in identifying the expenses, and significant differences between the 2015 and 2020 Review estimates, the Commission has concerns about the reliability of the data. The Commission intends to discontinue the major projects regulation assessment in the 2020 Review.

87 Some States commented on the assessment. South Australia said the major infrastructure projects assessment should be retained only if it remains material. The ACT said the driver of planning and regulation costs for major infrastructure projects should include Commonwealth non-dwelling construction, rather than just private non-dwelling construction to reflect the significant role of the Commonwealth in the ACT economy.⁹

Other research and development expenses

88 The Commission intends to continue assessing research and development (R&D) expenses classified to the Services to industry category on an EPC basis.

89 Currently, some but not all R&D expenses are included in the Services to industry category. The new COFOG-A classification separately identifies R&D spending for each 2-digit division, so all R&D expenses could be moved to the Services to industry category and be assessed EPC.

90 However, the ABS warns that the four-digit COFOG-A data are not reliable. Hence, the Commission intends to leave R&D expenses in their respective categories because the data are not considered reliable. It will also be simpler.

Wage costs and regional costs

91 Differences in wage costs between States have a differential effect on the cost of providing services. The Commission intends to apply the wage costs disability to all employee expenses in this category.

92 Some regulatory functions must be provided where businesses, including farms and mines, are located. The Commission considers there is a conceptual case for recognising higher regulation costs for States with more businesses located outside major metropolitan areas. The Commission has intends to apply the regional costs assessment to all regulation expenses.

93 The Commission does not intend to apply regional cost disabilities to business development expenses. Most States agreed. Western Australia said that a regional cost factor should be applied to both business development expenses and regulation expenses. It said it has regional development commissions in most of the major regions of the State including the Kimberley and Pilbara. In addition, agriculture business development has a regional focus.

94 A significant proportion of business development expenses are incurred in capital cities (for example, tourism, trade and investment promotion, business support), or are provided as grants or subsidies to businesses or industry. The Commission does

⁹ The materiality test for the assessment included Commonwealth non-dwelling construction.

not agree that regional cost disabilities should apply to business development expenses.

Administrative scale

- 95 All States undertake activities to regulate and develop their businesses and industries. These include State and regional development, investment and trade attraction, tourism promotion, biosecurity, mine safety, geological surveys, small business development and regulation, consumer protection and work safety. Since these activities are common to all States, the per capita costs of the less populous States are relatively high. The ACT's costs are somewhat lower as its city/State nature means it has virtually no agriculture and mining industries, and thus no need to provide these services.
- 96 The Commission reviewed the administrative scale allowance for services to industry and re-estimated scale expenses at \$33 million in 2016-17. This is 5.6% higher than the 2015 Review estimate. For details of the assessment, see Attachment 23 — Administrative scale.

REDISTRIBUTION FROM AN EPC ASSESSMENT

- 97 Table 14 shows the extent to which the assessment differs from an EPC assessment of services to industry expenses. States with a positive redistribution are assessed to have above average spending requirements and States with a negative redistribution are assessed to have below average spending requirements. In per capita terms, Northern Territory and Western Australia experience the largest redistributions.

Table 14 **Redistribution from an EPC assessment, Services to industry, 2017-18**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	-105	-140	21	216	-16	9	-11	26	272
\$ per capita	-13	-22	4	83	-9	18	-26	105	11

Note: The redistribution is the difference from an EPC assessment of category expenses.

Source: Commission calculation.

- 98 The main reasons for these redistributions are the differences between States in the level of activity in different industries (particularly mining), which affect regulation costs, along with differences between States in regional costs and wages.
- 99 The main reasons for the redistributions for each State are described below.
- For New South Wales, Victoria and the ACT, the below average need for spending is due to their relatively small agricultural and mining industries and relatively low regional costs. Similarly, South Australia has relatively small mining and other industries and relatively low wage costs.

- Western Australia’s above average need for spending is due to its relatively high level of economic activity in all sectors (particularly mining) and relatively high regional costs.
- Queensland’s above average need for spending is due to its relatively high level of economic activity in agriculture and mining, and relatively high regional costs. Similarly, Tasmania has a relatively high level of economic activity in agriculture and relatively high regional costs.
- For the Northern Territory, the above average need for spending is due to its relatively high level of economic activity in all industries, as well as relatively high regional and wage costs.

100 Table 15 provides a summary of the main disabilities contributing to the redistribution from an EPC assessment for this category.

Table 15 Major reasons for the redistribution, Services to industry, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Sector size	-105	-137	23	211	-8	12	-14	18	265
Wage costs	9	4	-4	-3	-8	-3	4	1	18
Regional costs	-8	-7	3	7	1	1	-1	4	15
Total	-105	-140	21	216	-16	9	-11	26	272

Note: The redistributions from an EPC assessment are illustrative. Disabilities may not add up due to rounding.

Source: Commission calculation.

UPDATING THE ASSESSMENT

101 As required by the terms of reference, the Commission will incorporate the latest available data in the assessment during the annual updates. This will allow the assessment to reflect changes in State circumstances.

- The following data will be updated annually:
 - category and industry expenses
 - factor income data used to measure sector size
 - population data.
- Some of the assessment data are not readily available on an annual basis, or remain stable over time. The data below will not be updated during the review period:
 - the proportion of industry expenses allocated to each component and sub-component, which are calculated from State-provided and GFS data.

OUTSTANDING ISSUES

102 From the Commission’s perspective, there are no outstanding issues for this assessment.

FURTHER CONSULTATION

103 Before the release of the final report by 28 February 2020, there will be opportunities for consultation on this assessment. For further information about this category, please contact Annie Abello at annie.abello@cgc.gov.au.

ATTACHMENT 20

OTHER EXPENSES

Summary of proposed changes to the 2015 Review methodology

- The natural disaster relief expense assessment excludes local government net expenses.
- The ACT cross-border disability for recreation and culture expenses within the service expenses component has been discontinued due to lack of evidence supporting the disability.
- Capital grants to local government are no longer being assessed because the driver of spending is unclear.
- National parks and wildlife expenses and pipeline expenses were previously part of the services expenses component, but are now included in the Services to communities category and Transport category, respectively. These changes are due to aligning categories with new Government Finance Statistics (GFS) classifications. National parks and wildlife expenses and pipeline expenses continue to be assessed equal per capita (EPC).
- National capital allowances for roads have been discontinued and the national capital planning allowance has been updated to reflect current needs.
- User charges are netted off expenses. They mainly comprise fire and emergency services levies (FESLs).
- No adjustment has been made for interstate non-wage costs.
- The regional costs disability now uses hospitals and schools data.

- 1 This attachment contains the Commission's draft proposals for the Other expenses category following consultation with the Commonwealth and States.

SERVICE OVERVIEW

- 2 State expenses on Other expenses were \$28.0 billion in 2017-18, representing 12.9% of total State expenses (Table 1). State spending on this function comprises expenses for:

- general public services — public debt transactions and transfers of a general nature between different levels of government, and other general public services such as central administrative agencies that support State service delivery agencies
- public order and safety services other than those provided by police, such as emergency services and fire protection
- expenses for recreation, culture and religion — including libraries, public halls, art and sport facilities
- expenses on natural disaster relief
- other assessments — including administrative scale, native title and land rights, and national capital expenses.¹

Table 1 State expenses on Other expenses by State, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT (a)	NT	Total
Total expenses (\$m)	9 197	5 148	6 555	1 963	2 052	873	1 277	923	27 987
Total expenses (\$pc)	1 161	806	1 321	760	1 187	1 662	3 067	3 740	1 130
Proportion of operating expenses (%)	13.8	10.3	14.7	7.8	13.4	18.0	31.4	17.1	12.9

Note: Expenses shown on a net basis.

(a) The ACT has classified a large proportion of expenses as general public services, mainly relating to the Chief Minister, Treasury and Economic Development Directorate. These expenses may be allocated to other functions in other States.

Source: Commission calculation using State budget data.

3 Table 2 shows the share of State expenses on other expenses from 2014-15 to 2017-18.

Table 2 State expenses on Other expenses, 2014-15 to 2017-18

	2014-15	2015-16	2016-17	2017-18
Total expenses (\$m)	24 514	25 123	25 166	27 987
Proportion of total operating expenses (%)	13.2	13.0	12.4	12.9

Note: Expenses shown on a net basis.

Source: Commission calculation using ABS Government Finance Statistics (GFS) and State budget data.

4 User charges were \$6.4 billion in 2017-18. They mainly included fire and emergency services levies (FESLs) and cultural and recreational services such as museum entry fees.² In this category, user charges are deducted from total category expenses so that the assessment only applies to net category expenses.

¹ Other assessments include expenses that relate to all functions, which for presentational purposes, are aggregated and assessed in the Other expenses category.

² See Attachment 4 — Land tax and Attachment 9 — Other revenue for a discussion of FESLs and the Commission decision to treat this revenue as user charges.

Table 3 Other expenses, user charges, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Revenue (\$m)	1 924	1 647	1 364	616	531	105	206	17	6 411
Revenue (\$pc)	243	258	275	238	307	200	495	70	259

Note: User charges refer to revenue from the sale of goods and services classified in GFS to economic type framework (ETF) 112.

Source: Commission calculation using ABS GFS and State budget data.

State roles and responsibilities

- 5 The diversity of services in this category means there is also a diverse range of service delivery processes. Large proportions of the legislative and general administrative services and some cultural and recreation services are delivered through major agencies and institutions located in metropolitan areas. Many cultural, recreational and public safety services are provided closer to where people live through State funding for local and community organisations or a network of State service delivery units.

Commonwealth roles and responsibilities

- 6 The Commonwealth provides funding to States to assist them in meeting their expenses. Most Commonwealth payments in the Other expenses category do not have an impact on the relativities. Some, like the general purpose assistance grants for local governments, are paid to third parties and do not have a direct impact upon State revenue. Commonwealth natural disaster relief payments to the States under the Disaster Recovery Funding Arrangements (DRFA) are also treated as having no impact on the relativities. They are netted off State expenses claimed under the DRFA.
- 7 Table 4 shows the main Commonwealth payments to the States for Other expenses in 2017-18.

Table 4 Commonwealth payments to the States for Other expenses, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
General purpose assistance to local government (\$m)	534	428	335	176	118	36	28	17	1 671
Natural Disaster Recovery and Rebuilding (\$m)	5	3	127	38	0	6	0	9	188
Natural Disaster Resilience Program (\$m)	10	10	15	2	3	3	3	3	48
ACT Municipal Services (\$m)	0	0	0	0	0	0	40	0	40
Other national partnership payments (\$m)	44	14	38	3	4	3	47	5	158
Total (\$m)	584	444	500	217	122	45	75	30	2 017
Total (\$pc)	74	70	101	84	71	86	180	122	81

Note: Table shows major payments only. Commonwealth own purpose expenses (COPEs) are not included. Payments that the Commission treats as 'no impact' are included in the table.

Source: Commonwealth *Final Budget Outcome, 2017-18*.

8 The complete list of Commonwealth payments and their treatment is available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).³

CATEGORY STRUCTURE

9 The assessment of the Other expenses category is undertaken in the following components:

- service expenses
- natural disaster relief expenses.

10 A further three disabilities are included in this category for presentational purposes, under the other assessments component:

- administrative scale
- native title and land rights
- national capital.

11 The disabilities in the other assessments component are discussed in Attachment 23 — Administrative scale and Attachment 26 — Other disabilities.

12 Components allow different disability assessments to apply to sub-functions. Table 5 shows the category's assessment structure, the size of each component and the disabilities that apply.

³ Most Commonwealth payments to the States affect the grant distribution but some do not. The Commission refers to payments that affect the grant distribution as 'impact' payments. For more information, see Attachment 2 — Commonwealth payments.

Table 5 Category structure, Other expenses, 2017-18

Component	Component expense	Disability	Influence measured by disability
	\$m		
Service expenses	24 980	EPC Wage costs (b) Regional costs (b)	The driver of these expenses is State population (a). Recognises differences in wage costs between States. Recognises the higher cost of providing services to more remote areas.
Natural disaster relief		(c) Actual expenses	Recognises State net out of pocket costs for natural disaster relief under the Australian Government's natural disaster relief arrangements. Australian Government assistance is netted off before making the assessment.
Other assessments	2 819	Administrative scale	Recognises the unavoidable costs each State incurs to provide the policy and administrative infrastructure necessary to provide the minimum unavoidable service, regardless of the size of the task.
	182	Native title and land rights	Recognises State costs of settling native title and land rights claims made under Australian Government legislation.
	7	National capital (d)	Recognises the costs to the ACT due to Canberra's status as the national capital and seat of government.

- (a) Population is considered the driver for most, but not all, expenses. For some expenses, such as debt charges, other factors besides population may apply, but expenses are not differentially assessed.
- (b) Applied to a subset of service expenses.
- (c) Natural disaster relief expenses are included with service expenses due to confidentiality requirements.
- (d) These expenses relate to planning. National capital costs related to police services are included in the Justice category.

Source: Commission calculation using ABS GFS and State budget data.

Category and component expenses

- 13 The main data sources for calculating category and component expenses are ABS Government Finance Statistics (GFS) and State budget data.⁴
- 14 State data are used in the natural disaster relief expenses component as States are able to provide the most recent data. Natural disaster relief expense data from Emergency Management Australia are also used as a cross-check on the State data.

⁴ Unless otherwise stated, category and component expenses for the first two assessment years are sourced from ABS GFS. States provide data for the most recent assessment year because GFS data are not available in time for the annual update.

ASSESSMENT APPROACH

Service expenses

- 15 Expenses for this component include general public services, public safety, culture and recreation, and communication expenses.⁵

Population

- 16 The cost of providing services such as general public services and administrative functions, public safety, and culture and recreation are unlikely to be influenced by particular population groups, and unit costs are unlikely to differ materially between States. Therefore the Commission has adopted State population shares as the major driver.

Regional costs

- 17 Differences in the cost of providing services to different regions within a State affect many State expenses. In remote areas, it may cost more to move inputs to some locations or more expensive inputs may be required. For example, additional inputs are often required in remote areas, such as more four wheel drive vehicles and additional fuel for emergency services.
- 18 The Commission considers that remoteness affects what States need to spend on public safety, culture and recreation, and communications; and part of the expenses for general public services and other purposes.
- 19 A general regional cost gradient, calculated using hospital and school data, is applied to the service expenses component because it is not practicable to directly measure the effect of remoteness on service expenses within the component, given the scope and diversity of this component. For further discussion and the calculation method for the general regional cost gradient, see Attachment 25 — Geography.

⁵ During the 2015 Review period, this component also included expenses for pipelines, which were classified with communications in GFS (\$135 million in 2016-17). Under current GFS classifications, pipelines are now grouped with other transport services, and therefore these expenses are now assessed in the Transport category. Similarly, during the 2015 Review period, national parks and wildlife expenses were grouped with recreation and culture expenses in GFS, but these expenses are now part of the environmental protection classification in GFS. Therefore, national parks and wildlife expenses (\$1.1 billion in 2016-17) are now assessed in the Services to communities category, environmental protection component. Debt charges (\$11.4 billion in 2016-17) are also included in this component. They are assessed equal per capita (EPC) because State capital needs are recognised in the Investment and Net borrowing assessments.

Wage costs

- 20 Differences in wage costs between States have a differential effect on the cost of providing services. There is a general method for measuring the influence of wage costs in components where the disability applies. For a description of the method see Attachment 24 — Wage costs.
- 21 The Commission considers that wage costs affect what States need to spend on public safety, culture and recreation, and communications; and part of the expenses for general public services and other purposes.

Data and method

- 22 Regional costs and wage costs disabilities are applied to expenses relating to public safety, culture and recreation, communications, and half of the expenses for general public services and other purposes. This amounted to applying regional costs and wage costs disabilities to 58% of total service expenses in 2017-18. The component is otherwise assessed equal per capita (EPC).

Component calculations

- 23 Table 6 shows the calculation of total assessed expenses for service expenses in 2017-18, combined with natural disaster relief expenses.⁶

Table 6 Illustrative assessment, service expenses and natural disaster relief components, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
EPC expenses (\$m)	7 988	6 440	5 005	2 605	1 743	529	420	249	24 980
Assessed expenses (\$m)	8 001	6 374	5 033	2 614	1 717	528	425	288	24 980
Assessed expenses (\$pc)	1 010	998	1 014	1 012	993	1 006	1 020	1 168	1 008

Note: This table includes both the service expenses and the natural disaster relief expenses components.

Source: Commission calculation.

Natural disaster relief expenses

- 24 Expenses for this component include State net out of pocket expenses under the Disaster Recovery Funding Arrangements (DRFA). The expenses incurred by local government and Commonwealth revenue passed to local government are excluded.

Data and method

- 25 State data are used to determine net expenses as States are able to provide the most recent data. States are asked to report on an accrual basis. Natural disaster relief

⁶ As several States consider their natural disaster relief expenses to be confidential, these expenses have been combined with the service expenses component.

expense data from Emergency Management Australia are also used as a cross-check on the State data.

- 26 Expenses include all eligible expenses under the DRFA,⁷ plus re-insurance premiums. Commonwealth payments to States are netted off the expenses. In addition, local government expenses and revenue are not included, although the Commission is seeking further information from States to finalise this part of the assessment.
- 27 State net expenses are assessed on an actual per capita (APC) basis because the Commission considers that State expenses are not policy influenced and are sufficiently comparable to make a reliable assessment.
- 28 In some years, States may revise their net expenses. Where these revisions are material at \$10 per capita,⁸ the Commission will make an adjustment to ensure that the correct expenses are assessed over time. If an adjustment is necessary, it will fully reflect the over- or under-statement of net expenses. Adjustments are only made for years that are current assessment years.

Component calculations

- 29 As several States consider their natural disaster relief expenses to be confidential, component calculations are not shown at the State level. Expenses for this component by State were included in the service expenses component (Table 6).

Other assessments

- 30 The assessments for administrative scale, native title and land rights, and national capital are discussed in Attachment 23 — Administrative scale and Attachment 26 — Other disabilities.

CATEGORY CALCULATIONS

- 31 Table 7 brings the assessed expenses for each component together to derive the total assessed expenses for each State for the category. It shows at the component level how each disability assessment moves expenses away from an EPC distribution to obtain assessed expenses.

⁷ State expenses that would otherwise be eligible under the DRFA, but do not exceed the small disaster criterion (\$240 000) required for Commonwealth reimbursement, are also considered to be eligible expenses for the Commission's purposes and are included in the assessment.

⁸ The \$10 per capita materiality threshold relates to data adjustments. This is different from the \$35 per capita materiality threshold, which relates to disabilities. See the Main Report, Chapter 2 for more information.

Table 7 Illustrative category assessment, Other expenses, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Service expenses and natural disaster relief									
EPC	1 008	1 008	1 008	1 008	1 008	1 008	1 008	1 008	1 008
Natural disaster relief, wage costs and regional costs	2	-10	6	3	-15	-3	12	158	0
Assessed expenses	1 010	998	1 014	1 012	993	1 006	1 020	1 168	1 008
Other assessments									
EPC	121	121	121	121	121	121	121	121	121
Administrative scale	-69	-58	-43	22	85	539	744	1 364	0
National capital	0	0	0	0	0	0	15	0	0
Native title and land rights	-6	-6	2	20	-3	-7	-7	137	0
Assessed expenses	46	57	81	163	203	653	873	1 621	121
Total assessed expenses	1 056	1 055	1 095	1 175	1 196	1 659	1 893	2 789	1 130

Note: Table may not add due to interactions between disabilities and rounding. The EPC expenses and assessed expenses are total spending per capita. The amounts for each disability are redistributions from an EPC assessment.

The natural disaster relief component has been combined with the service expenses component because the natural disaster relief assessment is confidential.

Source: Commission calculation.

INFRASTRUCTURE ASSESSMENT

- 32 States require infrastructure to support service delivery. State infrastructure requirements are assessed in the Investment category. The main driver of investment in other expenses related infrastructure is growth in the total population. Service use disabilities that affect recurrent service delivery expenses do not affect the quantity of infrastructure each State requires to provide the average level of service.
- 33 Interstate differences in construction costs are also recognised.
- 34 For a description of the Investment assessment, see Attachment 21 — Investment.

ASSESSMENT ISSUES

- 35 The 2015 Review assessments provided the starting point for the 2020 Review. In April 2018, Commission staff released a draft assessment paper (DAP) setting out staff proposals for the Other expenses category. States provided submissions on the proposals. The staff proposals and State submissions are available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).
- 36 The main assessment issues for the category were:

- whether natural disaster relief expenses were sufficiently comparable to warrant an APC assessment
 - how to treat natural disaster mitigation spending
 - how to treat local government expenses for natural disaster relief
 - whether to continue assessing capital grants to local governments
 - whether to include other community development and protection of the environment expenses in this category.
- 37 Assessment issues for the other assessments component are discussed in Attachment 23 — Administrative scale and Attachment 26 — Other disabilities.
- 38 The following sections discuss the main issues for Other expenses, including State views.⁹

Comparability of natural disaster relief expenses

- 39 The 2015 Review methodology assessed States’ net expenses for natural disaster relief under the then Natural Disaster Relief and Recovery Arrangements (NDRRA) framework on an APC basis because the Commission considered that differences between the States under the framework were not subject to significant policy influences. In the DAP, Commission staff proposed to continue to assess natural disaster relief expenses on an APC basis.
- 40 A new arrangement introduced by the Commonwealth, the Disaster Recovery Funding Arrangements (DRFA) 2018, applied from 1 November 2018 and replaced the NDRRA Determination 2017. The new arrangement affects assessments for the 2021 Update and beyond.
- 41 The new arrangements continue to specify that ‘States have a responsibility to put in place insurance arrangements which are cost effective for both the state and the Commonwealth’.¹⁰
- 42 The new arrangements provide additional specifications regarding the assurance processes for auditing claims. In addition, an independent technical review must now be conducted for projects worth \$25 million or more, and for complex or special circumstances, or where directed by the Commonwealth.

⁹ State submissions often include significant detail and supporting evidence. In this attachment, we respond to the arguments and evidence States presented in their submissions. For the full detail of State submissions, see the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

¹⁰ Department of Home Affairs, 2018, [Disaster Recovery Funding Arrangements 2018](https://www.disasterassist.gov.au/Documents/Natural-Disaster-Relief-and-Recovery-Arrangements/disaster-recovery-funding-arrangements-2018.pdf), (<https://www.disasterassist.gov.au/Documents/Natural-Disaster-Relief-and-Recovery-Arrangements/disaster-recovery-funding-arrangements-2018.pdf>), [accessed 15/03/19], clause 3.1.5.

- 43 New South Wales, Queensland, South Australia, Tasmania and the Northern Territory supported an APC assessment of natural disaster relief expenses. Western Australia did not comment on this assessment.
- 44 The ACT and Victoria were concerned that States' insurance arrangements are not comparable. The ACT also said that more insurance options are available to States compared to the last review. These States did not support an APC assessment. Victoria supported an EPC assessment. The ACT did not discuss what its preferred alternative would be.
- 45 The Commission considers that the Commonwealth is best placed to decide if State insurance arrangements are sufficient to satisfy the requirements of the funding agreements and to receive Commonwealth assistance. The Commonwealth considered this issue recently during its process of working with States to develop the DRFA 2018. In addition, the Commonwealth considered States' level of insurance and mitigation spending in its response to an insurance industry report, where the Commonwealth's response concluded that the requirements for State insurance arrangements within the DRFA 2018 are sufficient.¹¹
- 46 The Commission considers that both the previous NDRRA agreements and the DRFA 2018 contain sufficient safeguards to ensure that States' reported claims are comparable and eligible under the common framework, and that the Commonwealth has determined that State insurance arrangements are comparable. Therefore, these expenses should be assessed on an APC basis.

Natural disaster mitigation

- 47 The 2015 Review methodology assessed States' expenses for natural disaster relief mitigation on an EPC basis. In the DAP, Commission staff proposed to continue assessing natural disaster mitigation expenses on an EPC basis, due to the difficulty in obtaining expense data and identifying a reliable disability.
- 48 Victoria, Queensland, South Australia, Tasmania and the Northern Territory supported an EPC treatment of mitigation expenses.
- 49 The ACT said there were policy differences between States in relation to insurance and natural disaster mitigation measures. It supported an APC treatment of mitigation expenses given the APC treatment of natural disaster relief expenses.
- 50 New South Wales supported an APC treatment of mitigation expenses discounted by 50%.

¹¹ Australian Government, 2017, [Australian Government response to the Senate Economics References Committee report: Australia's general insurance industry: sapping consumers of the will to compare](https://static.treasury.gov.au/uploads/sites/1/2017/12/p2017-t248756.pdf), (https://static.treasury.gov.au/uploads/sites/1/2017/12/p2017-t248756.pdf), [accessed 13/03/19], p.6.

- 51 Western Australia did not comment on this assessment.
- 52 In its rejoinder submission to the DAP, the ACT noted that States that invest more heavily in natural disaster mitigation can be expected to have lower assessed expense needs than States that invest less in mitigation measures. The ACT further noted that States investing more heavily in mitigation would have no corresponding increase in assessed expenses. New South Wales and Victoria were also concerned about the overall treatment of mitigation and disaster relief expenses.
- 53 In the DAP, Commission staff noted that disaster mitigation spending does not have a separate classification under GFS and may be classified to various functional categories. It may be difficult for States to identify their mitigation spending in a comparable manner.
- 54 These difficulties in identifying the appropriate spending may also contribute to difficulties in validating the expenses. Mitigation expenses are likely to be incurred alongside regular maintenance and capital expenditure projects. It may be difficult for States to determine what portion of a complex project relates to natural disaster mitigation.
- 55 The Commission validates natural disaster relief expenses by comparing State claims to data from Emergency Management Australia and applying the thresholds and reimbursement allowances in the NDRRA/DRFA to confirm the accuracy of State-reported natural disaster relief expenses. However, there is no secondary dataset or spending formula available to assess the validity of mitigation expenses.
- 56 In addition, even if disaster mitigation expenses could be reliably identified, it is not clear what an appropriate driver might be. If undertaken, actuarial studies may provide some indication of differential susceptibility to natural disasters and the need for mitigation measures. However, any indicator is likely to be affected by differences between States in where people live, as well as differences in planning and zoning policies. An APC assessment, even discounted, would not be appropriate because there is considerable scope for State policies to affect the level of spending despite the NDRRA/DRFA requirement that all States have adequate mitigation strategies in place.
- 57 Due to the difficulties in identifying and validating disaster mitigation expenses, and in identifying a disability, the Commission will continue to assess disaster mitigation expenses on an EPC basis.

Natural disaster relief expenses for local government

- 58 During the 2019 Update, the Commission became aware that some States may have been recording local government out of pocket costs as part of their natural disaster relief expenses. This was mainly because the DRFA 2018 and previous arrangements

include local government expenses as eligible expenses, and do not distinguish between State expenses and local government expenses.

- 59 As the Commission's intention is only to recognise State out of pocket costs, for the 2019 Update it asked States to report revenue and expenses for local government separately. The purpose was to better understand the extent to which local government expenses are included.
- 60 After consulting with States, the Commission decided to remove local government expenses from the assessment in the 2019 Update.¹² States supported removing these expenses during the 2020 Review period. Western Australia did not comment on this decision.
- 61 In its data return, Western Australia said that in some States, State governments may ultimately fund some local government out of pocket costs.
- 62 After raising this issue during the State visits for the 2020 Review, it became clear that most States do not fund local government natural disaster relief out of pocket costs as a matter of course. Therefore, the Commission considers it is likely to be average policy for local governments to fund their own natural disaster relief expenses, with assistance from the Commonwealth (via States), and that the local government net expenses should continue to be excluded from the assessment.
- 63 States are asked to comment on their local government funding arrangements in their response to this draft report. If States do fund local government out of pocket costs, the Commission would require data on the amounts involved. It would also require a proposal for how these expenses should be assessed.

Capital grants for local government

- 64 The capital grants to local governments component was introduced during the 2015 Review to recognise the need for State support to local government for cultural and recreation facilities, and community amenities. The assessment used population growth as the disability, as the Commission expected that States with above average population growth would incur higher costs.
- 65 The component was not material by itself, and did not redistribute more than \$6 per capita for any State in 2017-18, although population growth was material across all categories. The expense drivers were also unclear, likely being a mix of population growth, employment creation, or the weaknesses of local government

¹² New South Wales, Victoria, South Australia and the ACT supported this decision. Queensland, Tasmania and the Northern Territory supported retaining local government expenses during the 2019 Update and removing them during the 2020 Review period. Western Australia did not comment. For more information, see CGC, *Report on GST Revenue Sharing Relativities, 2019 Update*, pp. 40-41.

revenue bases linked to population decline. Due to this, the Commission has discontinued the assessment. All States supported this change or did not comment.

Including other components in this category

- 66 Other community development and environmental protection expenses were assessed in the Services to communities category during the 2015 Review. In the DAP, Commission staff proposed to assess these components in the Other expenses category, as this category is where most spending affected by population is assessed.
- 67 States did not object to including these components with Other expenses except for the ACT, which noted its preference for these components to remain with the Services to communities category to improve transparency.
- 68 Upon further consideration, the Commission has decided to keep the other community development and environmental protection components in the Services to communities category, in order to maintain continuity with the 2015 Review category definitions and to simplify time series analyses.
- 69 Further issues regarding the other community development and environmental protection assessments are discussed in Attachment 15 — Services to communities.

National capital

- 70 During the 2015 Review, the Commission recognised costs incurred by the ACT in relation to police services, planning and roads due to Canberra's status as the national capital. The Commission intends to retain the police allowance, update the planning allowance to reflect current needs and to discontinue the roads allowance. For further information, refer to Attachment 26 — Other disabilities.

OTHER ISSUES CONSIDERED BY THE COMMISSION

- 71 There were a number of other issues considered by the Commission, largely in response to concerns raised by States. These issues related to the method for measuring existing disabilities or requests for new disabilities that were not included in the 2015 Review assessment. The main reasons for not assessing certain disabilities identified by States are:
- the conceptual case for a disability has not been established

- an assessment would not be material, that is, redistribute more than \$35 per capita for any State¹³
- data are not available to make a reliable assessment.

72 As discussed on page 11, the Commission investigated assessing natural disaster mitigation expenses, but decided not to assess these expenses because of the difficulty in identifying the relevant expenses and an appropriate driver.

Cross-border disability

73 During the 2015 Review, the Commission applied a cross-border disability to recreation and culture expenses in the service expenses component. This was intended to recognise that the ACT's costs for library, sports grounds and other cultural and recreational services were higher due to the use of these services by New South Wales residents.

74 The Commission considered new evidence provided by the ACT during the 2020 Review period but determined it was not sufficient to continue including a disability in the Other expenses category. This cross-border disability has thus been discontinued for the 2020 Review. The cross-border disability was small for this category, only redistributing \$12 per capita to the ACT in 2017-18.¹⁴ For more information, see Attachment 26 — Other disabilities.

Interstate non-wage costs¹⁵

75 In the 2015 Review, the Commission decided that there were differences between the costs of providing services in different capital cities. For example, Western Australia and the Northern Territory typically have higher costs associated with attending interstate meetings than New South Wales or Victoria.

76 The Commission still considers that there are differences between States in their interstate non-wage costs. However, a lack of data, and the difficulty in determining the magnitude, or even in some cases the direction, of an appropriate adjustment has led the Commission to cease this assessment.

77 Attachment 25 — Geography includes further information on this decision.

¹³ The Commission has set a materiality threshold for including a disability. The materiality test applies to the total impact the disability has on the redistribution across all revenue or expense categories in which it is assessed. To be included, a disability assessment must redistribute more than \$35 per capita away from an EPC assessment for any State.

¹⁴ Based on 2019 Update calculations.

¹⁵ Referred to as the 'location adjustment' during the 2015 Review.

REDISTRIBUTION FROM AN EPC ASSESSMENT

78 Table 8 shows the extent to which the assessment for this category differs from an EPC assessment of other expenses. States with a positive redistribution are assessed to have above average spending requirements and States with a negative redistribution are assessed to have below average spending requirements. In per capita terms, the Northern Territory, the ACT and Tasmania experience the largest redistributions.

Table 8 Redistribution from an EPC assessment, Other expenses, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	-585	-476	-175	116	115	278	318	409	1 236
\$ per capita	-74	-75	-35	45	67	529	763	1 659	50

Note: The redistribution is the difference from an EPC assessment of category expenses.

Source: Commission calculation.

79 The main reasons for these redistributions are the differences between States in their administrative scale expenses, regional costs and native title and land rights expenses.

80 The main reasons for the redistributions for each State are as follows.

- New South Wales, Victoria and Queensland have below average needs for administrative scale expenses. Other States have above average needs.
- The Northern Territory has above average needs due to regional costs and native title and land rights. Other States have needs that are not materially different from the average.
- The ACT has above average planning needs due to its status as the national capital and associated mandated requirements due to the National Capital Plan.

81 Table 9 provides a summary of the main disabilities contributing to the redistribution from an EPC assessment for this category.

Table 9 Major reasons for the redistribution, Other expenses, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Administrative scale	-547	-373	-214	56	148	283	310	336	1 133
Native title	-49	-36	12	52	-6	-4	-3	34	98
National capital	-2	-2	-1	-1	0	0	6	0	6
Other (a)	13	-65	28	8	-26	-1	5	39	93
Total	-585	-476	-175	116	115	278	318	409	1 236

Note: The redistributions from an EPC assessment are illustrative. Disabilities may not add due to rounding.

(a) Other reasons include regional costs, wage costs and natural disaster relief expenses.

Source: Commission calculation.

UPDATING THE ASSESSMENT

82 As required by the terms of reference, the Commission will incorporate the latest available data in the assessment during the annual updates. This will allow the assessment to reflect changes in State circumstances.

- The Commission will update the following data annually:
 - service expenses and the share of service expenses to which regional costs and wage costs disabilities apply
 - natural disaster relief expenses
 - data contributing to the assessment of native title and land rights, and part of the national capital assessment.
- Some of the assessment data are not readily available on an annual basis, or remain stable over time. We will not be updating these data during the review period.
 - Values for the administrative scale assessment and parts of the national capital assessment will be indexed annually, but otherwise are based on disabilities that will remain fixed for the review period.

OUTSTANDING ISSUES

83 The Commission is still seeking data from States to finalise this assessment.

- Several States have informally stated that they do not fund local government natural disaster relief out of pocket costs as a matter of course, although Western Australia has indicated that it does fund some of these expenses. States are asked to confirm their arrangements with local governments and the quantum of local government expenses that States fund from State own-source revenue.

FURTHER CONSULTATION

- 84 Before the release of the final report by 28 February 2020, there will be opportunities for consultation on this assessment. For further information about this category, please contact Anli Chin on anli.chin@cgc.gov.au.

ATTACHMENT 21

INVESTMENT

Summary of proposed changes to the 2015 Review methodology

- Investment and depreciation expenses are assessed together in the Investment assessment.
- Investment associated with each expense category is measured directly, rather than based on share of stock value.
- Three year averaging of disabilities has been removed to ensure consistency of population change and change in disabilities.
- Administrative scale is no longer assessed in the Investment assessment because depreciation associated with fixed administrative functions is now captured in the Administrative scale assessment.

- 1 This attachment contains the Commission’s draft proposals for the Investment category following consultation with the Commonwealth and States.

SERVICE OVERVIEW

- 2 The level of investment varies considerably between States, as shown in Table 1.¹ Total investment has grown considerably from earlier years, reaching \$30.6 billion in 2017-18 (Table 2), including:
 - investment in produced assets of \$29.0 billion
 - investment in non-produced assets of \$1.6 billion.
- 3 Physical assets have grown steadily between 2014-15 and 2017-18 reaching \$595.8 billion in 2017-18 (Table 2). Physical assets per capita varied across States from \$18 180 in Victoria to \$52 236 in the Northern Territory (Table 1).

¹ Includes investment in general government activities and housing and urban transport Public Non-Financial Corporations (PNFCs).

Table 1 Investment and physical assets by State, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Investment									
\$ million	9 395	11 461	4 772	2 005	1 395	355	595	650	30 629
\$ per capita	1 186	1 795	961	776	807	677	1 429	2 636	1 237
Assets									
\$ million	228 607	116 094	114 729	55 378	43 194	10 984	13 884	12 890	595 760
\$ per capita	28 859	18 180	23 114	21 435	24 992	20 924	33 352	52 236	24 051

Note: Investment shown on a gross basis. Includes investment in and assets in housing and urban transport PNFCs. Assets exclude non-produced assets (land).

Source: Commission calculation using State budget data.

Table 2 State Investment and physical assets, 2014-15 to 2017-18

	2014-15	2015-16	2016-17	2017-18
Investment (\$m)	19 840	21 874	30 073	30 629
Assets (\$m)	514 291	553 086	570 858	595 760

Note: Investment shown on a gross basis. Includes investment in and assets in housing and urban transport PNFCs. Assets exclude non-produced assets (land).

Source: Commission calculation using State budget data.

State roles and responsibilities

- 4 States build or purchase infrastructure to deliver services to their residents. The extent to which they invest in infrastructure has varied over time.
- 5 Some services, such as roads and housing, are inherently about the provision of infrastructure. They are, by their nature, capital intensive. The recurrent expenses associated with these services are much smaller than the associated capital stocks.
- 6 Most other services require capital to provide the service, but the service also entails significant recurrent expenditure. Within these types of services, the capital intensity can vary considerably.
- 7 Different services require different types of assets, and different types of assets depreciate at different rates. Roads and buildings tend to last longer, and hence depreciate at a slower rate, while vehicles and equipment tend to depreciate at a faster rate, and land does not depreciate at all.

Commonwealth roles and responsibilities

- 8 The Commonwealth provides funding to the States for infrastructure. Table 3 shows the main Commonwealth payments to the States for infrastructure in 2017-18.
- 9 The largest payments are provided for road infrastructure projects and for the Infrastructure Growth Package - Asset Recycling Initiative.

10 The complete list of Commonwealth payments and their treatment is available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).²

Table 3 Commonwealth payments to the States for Investment, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Infrastructure Investment program - Investment - Road (\$m)	988	226	948	307	336	85	0	0	2 890
Infrastructure Growth Package - Asset Recycling Initiative (\$m)	848	0	0	0	0	0	0	0	848
Infrastructure Investment program - Perth Freight link (\$m)	0	0	0	513	0	0	0	0	513
Remote Indigenous housing (\$m)	0	0	140	134	13	0	0	108	395
Other (\$m)	68	3	214	741	49	17	0	120	1 213
Total (\$m)	1 904	230	1 162	1 048	385	101	0	120	4 951
Total (\$pc)	240	36	234	406	223	193	0	488	200

Note: Table shows major payments only. Commonwealth Own Purpose Expenses (COPEs) are not included. Payments that the Commission treats as 'no impact' are included in the table.

Source: Commonwealth *Final Budget Outcome, 2017-18*.

CATEGORY STRUCTURE

The assessment of the Investment category is undertaken in 14 components. Table 4 shows the category's assessment structure and the size of each component. For each component, the disabilities are the relative size and the change in size of the relevant user population, the exact composition of which varies for every component.³

² Most Commonwealth payments to the States affect the grant distribution but some do not. The Commission refers to payments that affect the grant distribution as 'impact' payments. For more information, see Attachment 2 — Commonwealth payments.

³ The user population for a State in a component is calculated as State population multiplied by the relevant stock factor for the State.

Table 4 Category structure, Investment, 2017-18

Component	Investment	Asset stock
	\$b	\$b
Total category	30.6	
Total produced assets	29.0	595.8
Schools	2.3	63.3
Post-secondary education	0.3	7.1
Health	4.6	56.7
Housing	0.9	58.1
Welfare	0.2	3.5
Services to communities	0.3	4.5
Justice	1.6	20.4
Roads		
Rural roads	4.3	149.7
Urban roads	3.7	73.5
Transport		
Urban transport	8.3	105.2
Non-urban transport (a)	-2.2	1.0
Services to industry (a)	-0.1	3.9
Other expenses	4.7	48.8
Non-produced assets - land and other	1.6	n/a

Note: For each component, disabilities are growth in assessed user populations and number of assessed users.

(a) Negative investment is due to significant asset sales by some States, with disinvestment greater than investment.

n/a Investment in land is assessed equal per capita (EPC), stocks are not assessed.

Source: Commission calculation using ABS Government Finance Statistics (GFS) and State budget data.

Category and component investment

11 The main data sources for calculating category and component investment are ABS Government Finance Statistics (GFS) and State budget data.⁴

- Investment data by category — ABS provide GFS data for General Government (GG) and housing and urban transport Public Non-Financial Corporations (PNFCs) for early years; State data are provided for the latest year.
- Asset data by category – States provide GG and PNFC data for all assessment years.

⁴ Unless otherwise stated, category and component expenses for the first two assessment years are sourced from ABS GFS. States provide data for the most recent assessment year because GFS data are not available in time for the annual update.

ASSESSMENT APPROACH

- 12 The investment assessment provides each State with the capacity to:
 - invest in additional physical assets to provide the State’s new user population added through the year with the same per user stock the existing user population had at the start of the year, at the capital intensity of that State’s user population
 - invest in physical assets to ensure the user population receives the increase in assets brought about by the replacement of depreciated assets and the national increase in capital intensity during the year.
- 13 A State’s user population at the end of the year is proportional to its population at the end of the year multiplied by its relevant end of year stock factor. Similarly, the start of year user population is proportional to its population at the start of the year multiplied by its relevant start of year stock factor. The difference between the end of year and start of year user populations is the new user population.
- 14 The relative cost of providing physical assets is captured by the capital cost factor, which allows for the differences between States in wage levels, the price of materials and other unavoidable factors affecting the cost of providing infrastructure.
- 15 The net acquisition of non-produced physical assets (land and other) will be assessed on an equal per capita (EPC) basis.

Data

- 16 Data used in the assessment of investment are mainly provided by the ABS from the GFS and from the States.
 - Investment data by category — ABS provides GFS data (GG and housing and urban transport PNFCs) for early years, State data are provided for the latest year.
 - Asset data by category – States provide GG and PNFC data for all assessment years.
 - Stock disabilities —derived in the relevant category assessments.
 - Population data — from the ABS.
 - Cost disabilities — construction cost disabilities are derived from the Rawlinsons Australian Construction Handbook⁵, and the recurrent wage and regional costs assessments in each category (see Attachment 24 — Wage costs and Attachment 25 — Geography).

⁵ Australian Construction Handbook, Rawlinsons Publishing.

Component calculations

- 17 As in the 2015 Review, recurrent disabilities have been used as the basis for the capital stock factors in each category. Where recurrent disabilities are not considered relevant to stock requirements they have been removed from the stock factor or adjusted to capture needs relevant to stock requirements.
- 18 Table 5 shows the differences between the recurrent and capital influences captured for each category.
- 19 A number of recurrent assessments have changed since the 2015 Review. These changes generally flow through to the Investment assessment. In addition to this, some of the differences between capital and recurrent spending shown in Table 5 have changed:
 - in Health, capital requirements for cross border hospital use are now captured
 - in Welfare, concessions are no longer assumed to have any bearing on capital requirements
 - in Services to communities, no recurrent disabilities are assumed to have any bearing on capital requirements.

Table 5 Differences between indicators of recurrent expenses and capital requirements

Component	Difference from recurrent indicators
Schools education	Capital requirements are only assessed for government students. An adjustment is applied for additional costs of providing assets to Indigenous students in schools with more than 25% Indigenous enrolments. No other cost weights are included.
Post-secondary education	Indigenous and remoteness cost weights are not included.
Health	Cross-border hospital use is recognised for investment.
Welfare	In the case of concessions, the need to provide concession payments does not relate to infrastructure need.
Housing	First home owner grants have no bearing on State capital requirements. Additional costs for Indigenous households not in Indigenous specific housing are not included in the capital assessment.
Justice	The same disabilities are applied as in the recurrent expenses.
Services to communities	No disabilities are applied to capital needs.
Services to Industry	The same disabilities are applied as in the recurrent expenses.
Rural roads	The same disabilities are applied as in the recurrent expenses, although different weights are used to aggregate the disabilities.
Urban roads	The same disabilities are applied as in the recurrent expenses, although different weights are used to aggregate the disabilities.
Non-urban transport	The same disabilities are applied as in the recurrent expenses.
Urban Transport	Blended approach that recognises populations of State populations living in urban centres through the population-squared approach (25%) and urban centre characteristics on the costs (75%).
Other	No disabilities are applied to capital needs.

Note: Recurrent wage and regional costs disabilities are not assessed in the measure of capital stock requirements, but do affect the cost of capital.

CATEGORY CALCULATIONS

20 Table 6 shows the calculation of assessed investment in the schools component in 2017-18. This illustrates the methods used. The same methods are applied for other components to produce the assessed investments shown in Table 7. In this example, assessed users refers to cost weighted government school students; in other cases it refers to the relevant user population which can be calculated as the stock factor multiplied by the State population.⁶

⁶ For presentation purposes, in Table 6, States' user populations (population * stock factor) have been scaled to the number of students in government schools. Where a relevant defined user population exists, population * stock factor has been scaled to this value. This has no effect on the outcomes of the assessment, but can assist with analysis.

Table 6 Illustrative assessment, Investment in schools component, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Assessed school students									
Start of year ('000)	779	583	536	272	170	56	40	35	2 471
End of year ('000)	789	598	545	278	172	56	41	36	2 515
Assessed opening stock (\$m)	19 226	14 389	13 227	6 722	4 194	1 379	982	869	60 987
Assessed closing stock (\$m)	19 863	15 037	13 708	6 985	4 319	1 409	1 040	913	63 273
Assessed change in stock (\$m)	638	648	481	263	125	29	58	44	2 286
Cost factor	1.011	0.974	0.975	1.055	1.002	0.984	1.044	1.214	1.000
Assessed investment (\$m)	643	630	468	277	125	29	60	53	2 286
Assessed investment (\$pc)	81	99	94	107	72	55	144	215	92

Note: Numbers may not add due to rounding.

Source: Commission calculation.

Table 7 Illustrative assessment, Investment components, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Schools	643	630	468	277	125	29	60	53	2 286
Post-secondary	97	78	56	23	15	5	5	5	284
Health	1 419	1 129	983	483	346	138	64	86	4 647
Housing	299	315	207	56	33	15	14	2	941
Welfare	58	39	40	21	11	4	3	6	181
Services to communities	106	90	65	33	20	6	6	3	330
Justice	507	389	332	166	101	37	23	51	1 607
Roads									
Rural roads	1 089	656	1 136	649	356	114	14	326	4 340
Urban roads	1 147	1 003	808	340	187	55	79	33	3 650
Transport									
Urban transport	3 369	2 742	1 137	620	324	25	61	15	8 294
Non-urban transport	-723	-556	-436	-249	-158	-47	-39	-28	-2 236
Services to industry	-17	-2	0	-23	-12	-1	0	-2	-57
Other expenses	1 527	1 264	931	483	303	94	88	50	4 739
Land	519	418	325	169	113	34	27	16	1 622
Total	10 040	8 195	6 051	3 048	1 765	510	403	616	30 629

Source: Commission calculation.

ASSESSMENT ISSUES

21 The 2015 Review assessments provided the starting point for the 2020 Methodology Review. In April 2018, Commission staff released a draft assessment paper setting out staff proposals for the Investment category. States provided submissions on the

proposals. The staff proposals and State submissions are available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

- 22 The main assessment issues for the category are:
- functionalisation
 - gross vs net investment assessment
 - averaging stock disabilities
 - capturing changes in State circumstances
 - the treatment of administrative scale.
- 23 Most States were generally supportive of the proposed changes to the 2015 Review Investment assessment. However, most reserved final judgement until more details of redistributive effects of changes are provided. Western Australia did not support a move away from a broad, high level assessment.
- 24 The following sections discuss the main issues for category, including State views.⁷

Functionalisation

- 25 In the 2015 Review assessment, stocks, investment and stock factors for 10 categories were combined. The mechanism for doing so could lead to some perverse outcomes; in particular, the assumption that investment in each category was equal to its proportion of stock, not actual investment. This led to revaluations of particular stocks having unduly large effects on the redistribution in some circumstances. It also made it difficult to attribute changes in redistribution to a real world phenomenon, and contributed to the difficulty in understanding and validating the assessment.
- 26 For the 2020 Review, the Commission intends to assess investment needs for each category separately, not just roads and urban transport. Doing so will:
- make the assessment more accessible and transparent
 - simplify the task of interpreting the results
 - remove the impact of revaluations on the assessment
 - use actual investment by category
 - allow for further refinements to the method.

⁷ State submissions often include significant detail and supporting evidence. In this attachment, the Commission responds to the arguments and evidence States presented in their submissions. For the full detail of State submissions, see the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

State views

- 27 New South Wales, Victoria and the ACT supported functionalising the assessment, on the grounds that doing so will make the assessment more transparent. Queensland and the Northern Territory supported the move in principle but noted that any change should not have a material impact on the redistribution. Tasmania and South Australia asked for further analysis on the issue, including the impact on the redistribution of the move, prior to making a decision.
- 28 Western Australia considered that a move away from a broad, high level assessment would not make the assessment more transparent and that the data to do so are not of sufficient quality. Western Australia noted that functionalisation is not required to solve the problem with revaluations. It argued this could be solved by using closing stock weights to weight both opening and closing stocks.

Analysis

- 29 Western Australia considered that having a single driver (population growth) and a single stock disability is more transparent. However, the Commission, and most other States, consider that transparency and understanding are better achieved by a suite of stock disabilities that can be more readily related to real world phenomena.
- 30 Almost all the data required for a functionalised assessment are already used for the same purpose in the current assessment and are considered fit for purpose. The only data not already used are actual investment by category. These data are available from the ABS for all categories and from States for the latest year. The Commission is confident that these data are reliable and fit for purpose. Using these data will mean that the assessment better reflects 'what States do'. For example, the current approach assumes that, because housing is a large share of the stock of State assets, it represents a large share of new investment. Functionalising the assessment will mean the actual level of investment by each function will be reflected in the assessment.
- 31 In addition to improved transparency, the use of actual stock and investment data by category will improve the accuracy of the assessment. The use of the previous year's closing stocks to weight opening stock factors has resulted in revaluations having an unduly large effect on the assessment in some cases.⁸ The Commission agrees that Western Australia's suggested solution of using closing stock values to apportion opening stock values would also solve this problem. However, the Commission considers the use of actual stock and investment data will be more accurate and require no assumptions.

⁸ This can occur for States with large stock factors, for example the Northern Territory in relation to Services to communities.

- 32 Because investment can be volatile, using investment rather than stocks will introduce a new source of volatility. For example, under the 2015 Review approach, health represented 9% to 10% of stocks, and therefore of investment, between 2014-15 and 2017-18. Its actual share of gross investment varied between 21% and 16% over this period. However, removing the effects of revaluations will act to offset any increase in volatility arising from variable investment levels. It is difficult to determine the net change in volatility, partly because it can be difficult to distinguish between real change and volatility, and because, by its nature, volatility means that comparisons over a short period are not necessarily accurate representations of the longer term pattern.

Gross vs net investment assessment

- 33 For the 2020 Review, the Commission intends to assess net investment and depreciation expenses together in an assessment of gross investment.

State views

- 34 New South Wales, Queensland and the ACT supported an assessment of gross investment. New South Wales considered it a simplification and Queensland considered it conceptually sound to assess depreciation with the asset to which it relates. The ACT noted that as depreciation represents the decline in value of capital, it is appropriate and simpler to assess depreciation with net investment.
- 35 Victoria noted that as depreciation represents the consumption of capital, it is appropriate to assess depreciation with net investment in a gross assessment. However, it is not convinced a gross assessment would be more transparent as depreciation would no longer be separately identified. It also noted that any material difference between a net and gross approach would need to be understood and considered carefully to ensure a better Horizontal Fiscal Equalisation (HFE) outcome.
- 36 Western Australia, Tasmania and the Northern Territory did not support a gross assessment. Western Australia and Tasmania considered that, because growth effects investment but not depreciation, they should be assessed separately. Western Australia also believed the inclusion of depreciation with net investment would reduce transparency because the difference between opening and closing stocks would no longer represent the actual increase in stock levels. It considered this an ad-hoc simplification.
- 37 The Northern Territory considered that including the stable depreciation expense with unstable net investment expenditure would confuse the assessment. It asked for clarification of the model.

Analysis

- 38 Algebraically, the combination of drivers remains almost identical whether these assessments are made separately or together. The only difference is that under the 2015 Review approach depreciation is assessed in proportion to each State's share of adjusted closing population while, under a combined approach, it will be implicitly assessed in proportion to each State's adjusted opening population. This difference is not materially different unless population growth rates are 1.5 percentage points different from the national average. This does occur, although it is relatively rare.
- 39 Opening populations are a better indicator to use for depreciation of pre-existing assets. For assets purchased during the year, the conceptually most appropriate indicator would be the mid-year population, and on average these assets will only have half a year's depreciation. Therefore the Commission considers that opening populations are conceptually a better indicator to use for depreciation.
- 40 The Northern Territory expressed concerns with grouping a volatile (investment) assessment with a stable (depreciation) assessment. The Commission considers this to be one of the attractions of combining these assessments. While not changing the dollar value of the volatility, it does reduce the relative or apparent volatility of the investment assessment. In particular, it reduces the prospect or frequency of a State being assessed as needing negative investment.
- 41 The Commission accepts Western Australia's argument that 'opening stock' would no longer represent the value of assets at the start of the assessment year. Instead, 'opening stock' would represent the more abstract concept of 'assets held at the start of the year that would not be consumed during the year'. While that is the case, the Commission considers this to be a minor issue in the debate about the simplest and most transparent way of presenting the capital assessments, and to be outweighed by the improvements in transparency that a gross assessment provides.

Averaging stock disabilities

- 42 In the 2010 Review, three year averaging of stock factors was introduced to reduce the volatility generated primarily from capturing the growth in the stock factors within the year. This could affect the interaction between the population growth disability and the stock disability, creating a mismatch. This mismatch distorts results to some extent in every category but is most easily seen and explained in rural roads (described below). In the 2020 Review, the Commission intends to use single year stock disabilities.

State views

- 43 All States supported, or supported in principle, the use of single year disabilities, except Tasmania. New South Wales considered there a risk some States could be

disadvantaged due to the discontinuity this change would introduce. Queensland supported the proposal on the proviso that it should not significantly change GST shares. South Australia asked for further details of the impact on volatility.

- 44 Tasmania expressed concern over the potential for volatility to increase if averaging were removed from all category stock factors. It suggested using single year disabilities for rural roads only.

Analysis

- 45 While averaging stock factors is likely to reduce volatility in some categories, it has created a mismatch between the population growth element of the assessment and the growth captured by the stock factor. For example, in rural roads, the stock factor is based on fixed rural populations as a measure of road length. The assessment was designed to offset any increase in assessed road length associated with population growth with an equal reduction in needs due to the declining proportion of the rural population in the State. Averaging the stock factor meant this mechanism was not fully functional.
- 46 It would be possible to remove averaging in categories where doing so reduces volatility, as per Tasmania's suggestion. However in some cases it is difficult to determine whether changes in annual stock factors reflect volatility or genuine change. The Commission considers it is simpler to remove averaging in all categories as most of the effect of this change is in those categories where an obvious case for doing so exists.

Capturing changes in State circumstances

- 47 The 2015 Review assessment was designed to capture infrastructure needs related to changes in total State populations and changes in State circumstances within the year. It did so by applying current year population and stock factors to end of year stocks and the previous year population and stock factors to start of year stocks. Having considered whether, in a functionalised assessment, this continued to be the most reliable and transparent measure of need in the 2020 Review, the Commission intends to continue to recognise changes in population and all changes in State circumstances. To increase the transparency of the assessment, growth in user populations⁹ will be referred to as the driver of growth.
- 48 The Commission considered, but decided against, an assessment where:
- changes in State circumstances that can be reliably measured and which reflect the underlying change in circumstances are captured through a growth factor

⁹ Calculated as population multiplied by category disability.

- differences in State circumstances which are important but for which annual change cannot be reliably measured are captured through a stock factor
- the remaining disabilities are frozen in each year (apply the same stock factor to opening and closing stocks).

State views

- 49 **Growth factors.** New South Wales, Queensland, Tasmania, the ACT and the Northern Territory supported the use of category specific growth factors as this would more closely align infrastructure need with the relevant users of that infrastructure. Queensland noted its support on the condition that indicators reflect ‘what States do’, can be reliably measured and do not capture the same disabilities as the relevant stock factor. The ACT and the Northern Territory supported using total population growth where data are not available or an indicator cannot be determined.
- 50 Western Australia did not support the use of category specific growth factors or freezing disabilities. It argued that transparency would be lost because the Commission would be required to exercise judgement when choosing which factors to include in the growth factor and which to keep in the stock factor.
- 51 Victoria and South Australia asked for more information.
- 52 **Freezing stock factors.** New South Wales and the ACT supported freezing disabilities. The ACT noted that capturing the change in stock factors is overly complex and does not improve the accuracy of the assessment. The Northern Territory considered the proposal had merits but required more information on potential growth and stock factors before determining the impact on HFE.
- 53 Victoria was not convinced freezing disabilities would remove volatile and unreliable elements. It considered it may be appropriate to continue capturing the change in disabilities in the stock factor.
- 54 Western Australia considered that by freezing all stock factors and not capturing the growth in stock factors within the year, the assessment would no longer equalise stock requirements. It considered that freezing factors would erode the conceptual basis for the model.
- 55 Tasmania considered all changes should be included in the growth factor.

Analysis

- 56 The Commission considers the conceptual case for including changes in State circumstances is strong. States should be provided the capacity to invest in infrastructure according to changes in their requirements during the year. It also

accepts Western Australia’s argument that judgment is required to determine whether change in a disability is sufficiently reliable to use or not.

- 57 There are relatively few disabilities the Commission uses that it considers are suitable to measure levels, but not changes over time. Freezing these disabilities is unlikely to have a material effect on the Investment assessment. The Commission considers splitting the assessment in order to identify those disabilities that reliably measure annual change, and freezing those that cannot, lacks a conceptual basis, is potentially confusing and does not necessarily produce a better HFE outcome.
- 58 The Commission therefore does not consider change to the logic of the assessment to be warranted. However, it does consider that combining stock factors and population into a single user population indicator increases the transparency of the assessment.

Administrative scale

- 59 In the 2015 Review, to measure relative State need for investment, the Investment assessment used recurrent disabilities from each category incorporating administrative scale. This reflected that a portion of the asset stock States own relate to the fixed minimum administrative functions.
- 60 In the 2020 Review, the administrative scale assessment has been redeveloped. This approach incorporates the depreciation of assets associated with the fixed minimum administrative functions. The nature of the concept that administrative scale captures is inherently fixed, and not subject to growth. This means that there should be no net investment in the function. As such, the Commission does not intend to include administrative scale disabilities in the Investment assessment in the 2020 Review.

OTHER ISSUES CONSIDERED BY THE COMMISSION

- 61 There were a number of other issues considered by the Commission, largely in response to concerns raised by States. These issues related to the method for measuring existing disabilities or requests for new disabilities that were not included in the 2015 Review assessment. The main reasons for not assessing certain disabilities identified by States are:
- the conceptual case for a disability has not been established
 - an assessment would not be material, that is, redistribute more than \$35 per capita for any State¹⁰

¹⁰ The Commission has set a materiality threshold for including a disability. A disability assessment must redistribute more than \$35 per capita away from an EPC assessment for any State to be included. The materiality test applies to the total impact the disability has on the redistribution of funds across all revenue or expense categories in which it is assessed.

- data are not available to make a reliable assessment.

Treatment of land

- 62 New South Wales and Victoria did not support an EPC assessment of land purchases. They supported an assessment of the higher land costs in densely populated urban areas. Victoria also noted the impact of high land costs in growing outer areas of Melbourne. New South Wales argued prohibitive urban land costs result in the use of high cost tunnelling for road projects.
- 63 The ACT was not opposed to further investigation of differential land costs in large and small cities but noted that much of the cost is likely due to more complex infrastructure needs than higher land costs.
- 64 Western Australia supported an EPC assessment. It did not consider the data for the net asset acquisition of land to be appropriate for use in a differential assessment. It argued the classification of land sales may not relate to its function as sales are accounted for by the agency that has the land recorded on its balance sheet, and this may not necessarily be the agency that utilised the land. It also noted that in high cost urban areas States could sell government land and buy equivalent land at the same price. Therefore, the net effect of land acquisitions may not be significant. Western Australia also argued that the policy choice between different types of infrastructure affects the requirement to purchase land, for example, road surface transport compared with other forms of transport.
- 65 Tasmania supported an EPC assessment of land because there had been no change in the consistency of land valuations between States since the 2015 Review.

Analysis

- 66 It is not clear that a simple value of land is the appropriate driver, nor that the circumstances under which States acquire land are consistent and comparable. In any case, with total investment in land at only \$66 per capita, and ABS national accounts data suggesting that land value per capita in Tasmania and the Northern Territory is about 33% below the national average, an assessment is unlikely to be material. Therefore, the Commission intends to retain an EPC assessment of land purchases.

Population growth and asset utilisation

- 67 Western Australia argued that the effect of population growth on asset needs is not as direct as is assumed in the Commission's model.
- 68 Western Australia considered that States build assets in advance of demand, and that States with more volatile population growth face greater risks of stranded capital, as some of the assets they build may not be fully utilised if projected growth does not eventuate.

- 69 New South Wales considered that an assessment reflecting the relative utilisation of assets would be difficult to develop. It noted that additional costs associated with the higher construction standards for new assets would be, to some degree, offset by lower operating costs through more efficient design. There are significant inefficiencies in the operation of older hospitals and prisons and new technology in the urban transport sector can result in significant savings.
- 70 Victoria considered it would be difficult to quantify the impact of the age of asset stock on expense needs to acquire additional assets. It noted assets can be built both in anticipation of future demand and in response to current demand. A measure of capacity utilisation and the relationship with investment expenses would be required in order to include a disability concerning utilisation of assets. The current assessment provides States with the capacity to provide infrastructure over a period of time.
- 71 Tasmania considered there to be a conceptual case that faster growing States may achieve an efficiency saving or maintenance cost saving advantage due to having a younger average age of asset than a slower growing State. However, Tasmania considered that a lack of comparable data would make the benefits difficult to quantify.
- 72 The ACT did not consider further investigation of a disability necessary. The value of an existing asset reflects its initial purchase or construction cost less depreciation. As long as a national standard of valuation is adhered to and they are kept up to date there is no need to quantify the relative benefits generated or costs of maintenance.

Analysis

- 73 There are many mechanisms through which faster growing States with newer assets could face different cost profiles associated with constructing and maintaining the assets, and flow on recurrent expenses effects associated with the different asset mix.
- 74 Different mechanisms lead to fast growing States having higher and lower overall costs. None of these mechanisms can be reliably measured. It is not clear whether the net effect would be to increase or decrease costs for faster growing States.
- 75 Western Australia's argument that unpredictable population growth is more difficult to plan for than predictable growth is potentially relevant to the extent to which States build assets in anticipation of demand, rather than have over-used assets and then build to reduce excessive congestion of hospitals, prisons or transport. It is not the variability of population growth that is important but its predictability. Some sources of population growth variability are more predictable than others. The predictability of the population distribution is also more important than the predictability of total State population. It is not clear how the Commission could

construct a disability to assess State treasuries' ability to accurately predict future asset demand.

- 76 Consider a hypothetical example were a State builds a full range of assets for 1% additional population growth that may not arrive when expected. If that population does not arrive, the State will have temporarily stranded capital.
- 77 States, on average, have \$24 000 of physical assets per capita. If a State's volatile population growth means it needs to build new assets for 1% population growth above its, as yet unknown, actual population growth, then it will need to build \$240 worth of assets per capita. Those assets will be useful once the population eventually arrives, but in the meantime, at 5% interest, it pays \$12 per capita interest charges on those stranded assets.
- 78 Even with very generous assumptions about the differences between States in the predictability of population growth and about the tendency of States to build assets in all classes in advance of demand, an adjustment is not approaching materiality.

Construction cost indices

- 79 The cost of construction varies between States. In the 2015 Review this was measured through a combination of the Rawlinsons construction cost indices and recurrent cost factors. Some States have claimed that other factors also affect the differences in the cost of construction between States.
- 80 South Australia, Tasmania and the ACT supported retaining the 2015 Review method.
- 81 Victoria and the Northern Territory considered the method could be further refined. Victoria believed the Commission should consider whether Rawlinsons indices capture costs associated with developing brownfield sites, for example, site remediation, interface with existing buildings and geotechnical issues. It also considered the cost factor for urban transport could be adjusted to account for the cost implications of different forms of transport.
- 82 The Northern Territory considered there may be merit in determining whether the Rawlinsons indices account for the additional costs associated with building on Indigenous land related to cultural considerations. For example, a greenfield subdivision had to be constructed in Maningrida due to sacred site and cultural issues on existing sites, significantly adding to construction costs.
- 83 New South Wales, Western Australia and Queensland did not comment.

Analysis

- 84 The Commission consider there is a conceptual case for assessing higher costs associated with constructing infrastructure on Indigenous land. The Northern Territory provided evidence during the State visit of the increased costs

associated with providing housing infrastructure due to the long consultation process and the necessity to build in less cost effective areas because of cultural considerations such as burial sites or cursed land. It is likely that similar costs are present in Indigenous communities in all States, particularly those on land covered by native title.

- 85 The current assessment uses a measure of regional construction costs from Rawlinsons. It provides an estimate of the cost of building a like structure in different locations within the State. Cultural considerations, such as those mentioned by the Northern Territory, are considered 'below the line' costs and are not captured by the regional indices.
- 86 However, in the absence of data on the magnitude of these costs from the Northern Territory or any other States, it is not possible to determine the appropriate disability weight.
- 87 The treatment of brownfield areas is considered in Attachment 25 — Geography.

Public-private partnerships

- 88 Tasmania and the ACT considered there was a conceptual case for an assessment reflecting the difficulties smaller States face in attracting private investment through Public Private Partnerships (PPPs) due to relatively small infrastructure capacity constraints, limited capacity for user pays infrastructure and difficulty attracting labour. The ACT provided evidence to suggest that PPPs provide a value for money advantage of 10% compared with direct procurement. However, Tasmania noted it would be difficult to quantify and the ACT have not yet provided any data to support an assessment.
- 89 New South Wales and Victoria did not support an assessment. Victoria considered the need for PPPs, in particular user pay PPPs, are likely to be restricted to major cities where congestion costs are high.

Analysis

- 90 In 2016-17, States acquired \$2.3 billion of assets under financial leases. Accepting the ACT assertion that PPPs attract a saving of 10% over traditional direct investment would mean the national average saving is around \$9 per capita. It seems unlikely that the differential access States have to PPPs would represent a material adjustment.
- 91 The Commission also sees merit in Victoria's argument that the primary reason that smaller States do not attract user pays PPPs is that they have less need for road tunnels or other infrastructure that warrant it.

Physical environment

- 92 The Northern Territory considered that the impact of physical environment factors on infrastructure needs should be considered in the 2020 Review. It referred to consultant's findings¹¹ in the 2015 Review that environmental characteristics have the largest impact on the cost of roads and a significant impact on public schools and housing.
- 93 It noted the difficulties associated with providing infrastructure in the wet season add significantly to project costs and are not sufficiently captured by the current construction cost assessment based on the Rawlinsons indices.

Analysis

- 94 In the 2015 Review, the Commission did not make a separate assessment of environmental influences based on the consultant's findings because some influences are captured by the Rawlinsons indices in the construction cost factor and there was no way to avoid double counting those influences.
- 95 The capital costs assessment includes an assessment of higher costs in remote areas. One of the reasons that costs are higher in remote areas is because some remote areas have climatic conditions which increase the cost of delivering services. Therefore, physical environmental influences that are correlated with remoteness are captured in the capital costs assessment.
- 96 Of course, not all remote areas face the same cost pressures. The question is whether some States have a higher share of high cost areas than other States. Climatic indicators seem unlikely to be appropriate proxies for high cost areas. For example, Australia's wettest town is Baninda, a remote town with an average annual rainfall of 4 279mm, 60km south of Cairns on the Bruce Highway. The Commission does not know whether this area faces among the most expensive construction costs in the country. Therefore rainfall may not be the best indicator of high cost areas. Without additional nationally consistent climatic and cost data, it is not possible to make an assessment, nor is it possible to ensure there is no double counting with influences already recognised in the cost factor.

Measure of population growth following a census

- 97 The Commission considers that population growth should be measured by the change in population levels, rather than births, deaths and net migration. The Commission intends that, in updates using the 2020 Review methods, any intercensal difference

¹¹ *Impact of environmental characteristics on asset costs*, Pottinger and AECOM, 27 June 2013. This consultant's report is available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

arising in the 2021 Census will be incorporated into the measure of population growth.

- 98 The ACT supported the proposal. Western Australia and the Northern Territory did not support using population levels. Western Australia did not consider it appropriate to determine the treatment of the intercensal error in the 2021 Census until the circumstances concerning any errors are determined. It also queried whether the ABS view that its data were fit for purpose reflected a consideration that the data were specifically fit for the purposes the Commission uses it for.
- 99 The Northern Territory supported excluding the intercensal discrepancy as it is not a measure of population growth, rather an error adjustment.
- 100 No other State commented on the proposal.

Analysis

- 101 The 2020 Review assessment refers to user populations, derived by combining population and stock factors, as the driver of change. Therefore, the same concept of population should be used to generate stock factors as is used to generate the population measure. As total published ABS populations are used to produce stock factors (they often rely on disaggregated estimated resident population (ERP)), total published ABS populations must be used to measure population growth.
- 102 While the Commission considers this to be a compelling argument for use of published population figures, it is also worth considering the issue in the context of previous methods.
- 103 The Commission note that following the 2011 and 2016 Censuses, ABS advice was sought when considering the appropriate treatment of any intercensal discrepancy. In the 2013 Update, the Commission used the 2011 Census based ERP, and calculated ERP in previous years by subtracting the ABS measures of growth (based on births, deaths and migration). In the 2018 Update, again following ABS advice, the Commission used the published ABS population series, and so the growth measure included births, deaths, migration and an intercensal error term.
- 104 In the 2018 Update, the Commission said:
- The ABS considers that there is no strong evidence for any particular source of error, and it has followed its usual practice of assigning all the intercensal difference evenly across the intercensal periods. It regards these as the official population estimates, which are fit for purpose.
- 105 Western Australia queried the technical interpretation of the final sentence in the above paragraph. The ABS has not commented specifically on whether its population estimates are fit for the Commission's purposes. It did not do this following the 2011 and 2016 Censuses. The ABS uses 'fit for purpose' not to mean that it is the appropriate dataset for anything anybody wants to do, nor does it assess how

individual users use its data, and the appropriateness of that use. Rather, the ABS appears to mean that it is a reliable measure that users can collectively use to measure what it claims to measure.

- 106 While Western Australia may consider there is a 'lack of satisfactory resolution of the treatment of the 2016 Census intercensal difference', the Commission regards the 2018 Update as resolved.
- 107 To the extent intercensal error actually represents an error in the census level, rather than an error in the measures of growth, there are likely to be offsetting intercensal discrepancies in future censuses. For example, if Victoria's high intercensal error in 2011-2016 reflected, at least in part, an over-estimate of its 2016 population, the 2016-2021 intercensal error is likely to be a large negative for Victoria. This pattern of offsetting adjacent intercensal errors has been seen repeatedly in the 40 years of intercensal error. The Commission considers that consistent treatment is important in this context.
- 108 Western Australia argued that the Commission does not know the full circumstances of the 2021 Census, and so should not lock itself in to a future treatment. The Commission considers that this argument could be made for all methods and notes this proposal does not prevent future Commissions revisiting this or other methods if circumstances arise.

Presentation of the investment assessment

- 109 In a functionalised assessment, investment could be grouped with recurrent expenses in each category, or it could be grouped with investment. Accordingly, it is worth considering whether it is more helpful to consider schools investment as part of schools, or part of investment.
- 110 The ACT and the Northern Territory considered investment should remain a distinct assessment to maintain transparency (the ACT) and to avoid introducing volatility into the relatively smooth recurrent assessments (the Northern Territory). Tasmania considered there were benefits in presenting capital expenditure together with recurrent expenditure, but understood it would introduce volatility. It also noted if gross investment is assessed, it would not be possible to separately identify recurrent and capital expenses.
- 111 The Commission will continue to assess investment centrally, in a single investment category, with components for investment associated with each expense category. However, as investment will be assessed by category, it will be possible to aggregate recurrent and capital expenses for presentation purposes.

REDISTRIBUTION FROM AN EPC ASSESSMENT

112 Table 8 and Table 9 show the extent to which the assessment for this category differs from an EPC assessment of investment expenses. States with a positive redistribution are assessed to have above average spending requirements and States with a negative redistribution are assessed to have below average spending requirements. In per capita terms South Australia, Tasmania and the Northern Territory experience the largest redistributions.

Table 8 Redistribution from an EPC assessment, Investment, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Schools	-88	41	10	39	-34	-20	22	30	142
Post-secondary	6	5	-1	-7	-5	-1	0	2	13
Health	-67	-69	52	-2	22	39	-14	40	152
Housing	-2	73	18	-42	-32	-5	-2	-8	91
Welfare	0	-8	4	2	-2	0	0	4	10
Services to communities	1	5	-1	-2	-3	-1	1	0	6
Justice	-7	-25	10	-1	-11	3	-4	35	48
Roads									
Rural roads	-299	-463	266	196	54	22	-59	283	821
Urban roads	-20	62	76	-41	-68	-22	17	-4	155
Transport									
Urban transport	717	604	-525	-245	-254	-151	-79	-68	1 321
Non-urban transport	-8	21	12	-16	-2	0	-1	-5	33
Services to industry	1	12	11	-17	-8	1	1	-1	26
Other expenses	11	42	-19	-11	-28	-7	8	3	65
Land	0	0	0	0	0	0	0	0	0
Total	245	299	-87	-146	-372	-139	-112	311	856

Note: The redistribution is the difference from an EPC assessment of category expenses.

Source: Commission calculation.

Table 9 Per capita redistribution from an EPC assessment, Investment, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Schools	-11	6	2	15	-20	-38	52	123	6
Post-secondary	1	1	0	-3	-3	-1	1	7	1
Health	-8	-11	10	-1	13	75	-35	161	6
Housing	0	11	4	-16	-19	-9	-5	-31	4
Welfare	0	-1	1	1	-1	0	0	15	0
Services to communities	0	1	0	-1	-2	-1	2	0	0
Justice	-1	-4	2	0	-6	6	-10	142	2
Roads									
Rural roads	-38	-72	54	76	31	42	-142	1 147	33
Urban roads	-3	10	15	-16	-39	-42	41	-15	6
Transport									
Urban transport	90	95	-106	-95	-147	-287	-189	-275	53
Non-urban transport	-1	3	2	-6	-1	1	-3	-22	1
Services to industry	0	2	2	-7	-4	1	1	-5	1
Other expenses	1	7	-4	-4	-16	-13	19	12	3
Land	0	0	0	0	0	0	0	0	0
Total	31	47	-17	-57	-215	-266	-268	1 261	35

Note: The redistribution is the difference from an EPC assessment of category expenses.

Source: Commission calculation.

113 The main reasons for the redistributions for each State are:

- New South Wales' high urban transport investment needs are largely offset by its below average requirement for rural road investment, and slower than average growth in school students and urban population (and hence schools and urban road investment needs).
- Victoria, similarly, has above average urban transport investment needs. This is compounded by the above average population growth in Melbourne, affecting both urban transport and urban roads and by the growth in most service populations, especially government school students and users of social housing. This is partially offset by Victoria's below average rural road needs.
- The decentralised nature of Queensland means it has a below average need for urban transport and above average needs for rural roads. The below average urban transport needs are completely offset by the above average rural roads needs and above average growth in user populations across almost all services, resulting in no net redistribution from investment in Queensland.
- Western Australia's relatively slow population growth means it has below average growth of user populations across a range of services. This is compounded by low needs for urban transport, but somewhat offset by high needs for rural road investment and high construction costs.

- The redistribution for South Australia is predominately due to a below average requirement for urban transport investment. Below average growth in all service using populations compounds this.
- In Tasmania, below average needs for urban transport infrastructure resulted in a well below average share of assessed investment needs in urban transport. This was compounded by below average growth in all user populations except health (due to Tasmania's rapidly ageing population). Tasmania's above average rural road network offset these effects slightly.
- The ACT's result is due primarily to its below average requirement for urban transport and rural roads. This is somewhat offset by a rapid growth in its urban population and government school students, which increased needs for urban roads and schools infrastructure.
- The Northern Territory has above average capital requirements for rural roads, health and justice. This was compounded by high assessed costs of construction. Below average urban transport needs mitigated these effects somewhat, as did below average growth in most user populations except school students.

UPDATING THE ASSESSMENT

114 As required by the terms of reference, the Commission will incorporate the latest available data in the assessment during the annual updates. This will allow the assessment to reflect changes in State circumstances.

- The following data will be updated annually:
 - population and State circumstance data to the extent similar data in the recurrent assessments can be updated
 - investment and stocks of assets
 - Rawlinsons capital city and regional cost indices.

OUTSTANDING ISSUES

115 In this review the regional costs assessments have changed significantly, with a number of categories getting regional cost gradients which reflect recurrent spending in those categories. In addition to this, in some areas, in particular police, it is no longer possible to separately identify the regional cost influences. Because of these changes, the Commission is still considering how best to measure differences in the cost of investment, using the available data on recurrent regional and wage cost measures and the construction cost factors derived from Rawlinsons construction handbook.

FURTHER CONSULTATION

- 116 Before the release of the final report by 28 February 2020, there will be opportunities for consultation on this assessment. For further information about this category, please contact Carrie Dreese on Carrie.Dreese@cgc.gov.au.

ATTACHMENT 22

NET BORROWING

Summary of proposed changes to the 2015 Review methodology

- The 12.5% discount to total assessed net borrowing is no longer applied.

- 1 This attachment contains the Commission's draft proposals for the Net borrowing category following consultation with the Commonwealth and States.

SERVICE OVERVIEW

- 2 Net borrowing is the amount by which the total outlays¹ of the State general government sector exceed its total revenue. For the purposes of the Commission's assessments, it includes the net borrowing of State housing and urban transport public non-financial corporations (PNFCs) because the Commission treats their services as general government activities. When a State's total outlays exceed its total revenue, it must borrow or liquidate financial assets, thereby reducing its net financial worth. Conversely, when its total revenue exceeds total outlays, it saves and increases its net financial worth.
- 3 Net financial assets consist of cash, deposits and equity in public corporations less liabilities. Treating the services provided by State housing and urban transport corporations as general government activities does not change State net worth (the total of State infrastructure, land and net financial assets). However, it changes its composition. The value of infrastructure and land held by State housing and urban transport corporations is regarded as State infrastructure and land holdings rather than net financial assets.
- 4 Table 1 shows net borrowing amounted to \$17.5 billion and net financial assets were -\$98.3 billion in 2017-18. For all States, liabilities exceeded financial assets, resulting in negative net financial assets in all States in 2017-18.

¹ Total outlays are the sum of total operating expenses and investment in infrastructure and land.

Table 1 Net borrowing and net financial assets by State, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Net borrowing									
\$ million	4 782	8 062	237	2 508	978	9	181	705	17 464
\$ per capita	604	1 263	48	971	566	18	435	2 857	705
Net financial assets									
\$ million	-46 887	-11 551	-13 315	-92	-13 539	-2 156	-6 195	-4 591	-98 325
\$ per capita	-5 919	-1 809	-2 683	-35	-7 834	-4 106	-14 882	-18 604	-3 969

Note: Government Finance Statistics (GFS) general government net borrowing and net financial assets at the end of each financial year as adjusted to treat housing and urban transport public corporations as part of the general government sector.

Source: Commission calculation using ABS GFS and State provided data.

5 Table 2 shows net borrowing increased in each year from 2014-15 to 2017-18. States, in total, held negative net financial assets during this period, although Western Australia's financial assets exceeded its liabilities until 2016-17.

Table 2 Total State net borrowing and net financial assets, 2014-15 to 2017-18

	2014-15	2015-16	2016-17	2017-18
Net borrowing (\$m)	7 506	8 821	14 600	17 464
Net financial assets (\$m)	-92 163	-126 208	-82 029	-98 325

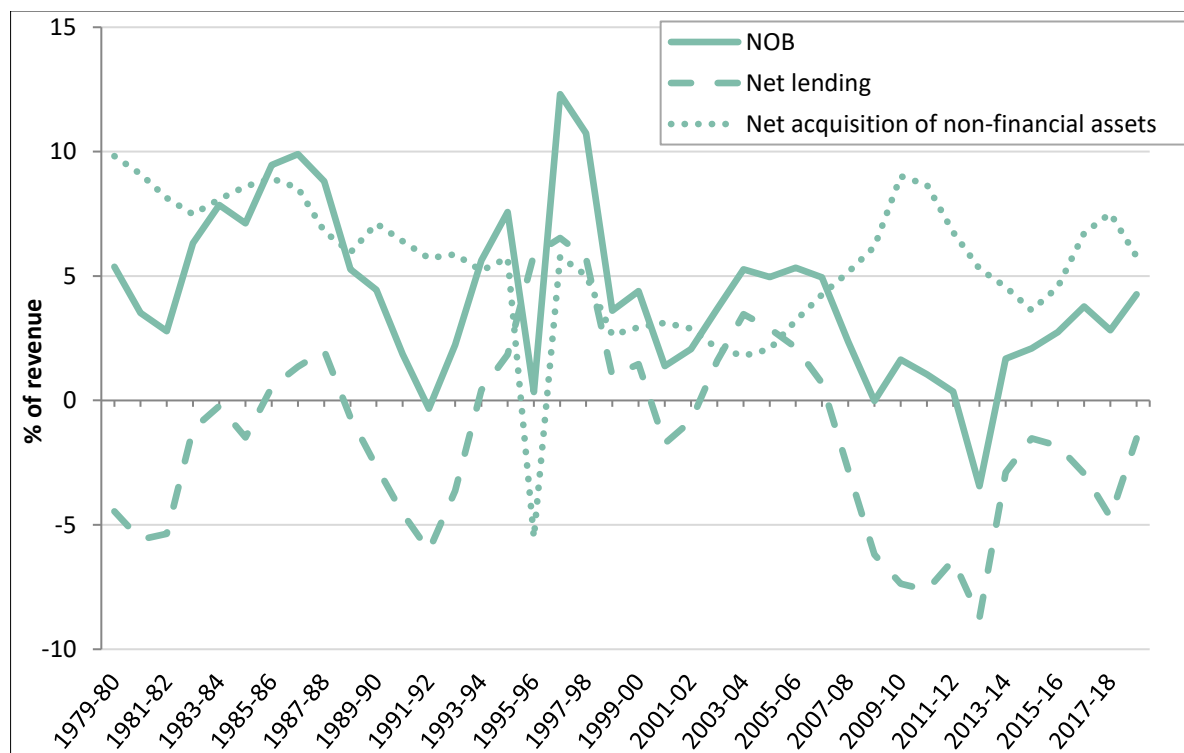
Note: GFS general government net financial assets at the end of each financial year as adjusted to treat housing and urban transport public corporations as part of the general government sector.

Source: Commission calculation using ABS GFS and State provided data.

State roles and responsibilities

6 Over the past 35 years, as Figure 1 shows, States have on average run Net Operating Balance (NOB) surpluses but been net borrowers (that is, net lending is negative). Indeed, there have only been three years in which they collectively ran NOB deficits. In the 15 years to 2007-08, States on average funded asset accumulation from NOB savings (so that net lending was positive). Since 2007-08, States have again become net borrowers. Funding to cover the acquisition of non-financial assets has come from a mixture of savings (the NOB balance in the year) and borrowings.

Figure 1 Balancing State budgets since 1980



Note: Net borrowing is negative net lending.
 Source: ABS, 5512.0 Government Finance Statistics, Australia.

CATEGORY STRUCTURE

7 Table 3 shows the category’s assessment structure, the size of the category and the disability that applies.

Table 3 Category structure, Net borrowing, 2017-18

Component	Component net borrowing	Disability	Influence measured by disability
	\$m		
Net borrowing	17 464	Population growth	Recognises the per capita value of State net financial worth is reduced by population growth.

Source: Commission calculation using ABS GFS and State provided data.

Category and component net borrowing

8 The main data source for calculating category and component net borrowing are ABS Government Finance Statistics (GFS) and State budget data.²

² Unless otherwise stated, category and component expenses for the first two assessment years are sourced from ABS GFS. States provide data for the most recent assessment year because GFS data are not available in time for the annual update.

ASSESSMENT APPROACH

- 9 The Net borrowing formula remains unchanged from the 2015 Review. The assessment provides States with the capacity to acquire new financial assets (or new financial liabilities as States are collectively in a net financial liability position) to provide the new population with the same per capita financial assets (liabilities) as the existing population. This ensures States have the capacity to hold equal net financial assets per capita under the assumption that they started the year with equal net financial assets per capita.

Data

- 10 Data used in the assessment of gross investment and net borrowing are mainly provided by the ABS from the Government Finance Statistics (GFS) and from the States.
- Net borrowing and net financial asset data — ABS provide GFS data for early years, State data are provided for the latest year and for housing and urban transport PNFCs.

CATEGORY CALCULATIONS

- 11 Table 4 shows how assessed net borrowing is calculated. Assessed net financial assets at the start or end of the year are calculated as States' shares of net financial assets at that time in proportion to their share of population at that time. Assessed net borrowing (negative net lending) is the difference between assessed assets at the end and start of the year.

Table 4 Illustrative category assessment, Net borrowing, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Assessed net financial assets									
at the end of year (\$m)	-31 444	-25 348	-19 703	-10 255	-6 860	-2 084	-1 652	-979	-98 325
at start of the year (\$m)	-25 871	-20 708	-16 195	-8 501	-5 695	-1 724	-1 351	-816	-80 861
Assessed net borrowing (\$m) (a)	5 573	4 640	3 508	1 754	1 165	360	301	163	17 464
Assessed net borrowing (\$pc)	704	727	707	679	674	686	723	661	705

(a) Net borrowing reduces net financial assets.

Source: Commission calculation.

ASSESSMENT ISSUES

- 12 The 2015 Review assessments provided the starting point for the 2020 Methodology Review. In April 2018, Commission staff released a draft assessment paper setting out staff proposals for the Net borrowing category. States provided submissions on the proposals. The staff proposals and State submissions are available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).
- 13 The assessment issues for the category are:
- whether to differentially assess net borrowing
 - removal of the 12.5% discount.
- 14 The following sections discuss these issues, including State views.³ States did not raise any other issues.

Whether to differentially assess net borrowing

- 15 Victoria argued that an equal per capita (EPC) assessment may be more appropriate because an assessment that directly counters the direction of redistribution in the Investment assessment is counterintuitive. It noted that States tend to apply their net operating balance to the net acquisition of non-financial assets rather than debt reduction. It also noted that States have targets for net debt as a proportion of Gross State Product which can operate as a constraint to acquiring non-financial assets.
- 16 The assessment is designed to ensure States end the year with equal per capita net financial assets. In doing so, the assumption is that States can earn the same return on these assets.⁴ In the current environment, when States hold net liabilities, faster growing States will end the year with below average per capita liabilities and therefore have a lower GST requirement. That is, slower growing States have higher GST requirements because their liabilities are being diluted at a slower rate than faster growing States. If States held net financial assets on average, faster growing States would have higher GST requirements. The Commission continues to consider this a conceptually valid model.

Removal of 12.5% discount

- 17 In the 2020 Review no discount will be applied in the Net borrowing assessment.
- 18 Queensland, Tasmania, the ACT and the Northern Territory supported the removal of the discount because the effect is immaterial (Queensland and the

³ State submissions often include significant detail and supporting evidence. In this attachment, the Commission responds to the arguments and evidence States presented in their submissions. For the full detail of State submissions, see the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

⁴ A consequence of the model and this assumption is that the Commission can assess interest earnings and dividends on an EPC basis.

Northern Territory) and because it results in a counterintuitive redistribution when States are net borrowers (Tasmania).

- 19 The current assessment of net borrowing applies a 12.5% discount to recognise the possibility that population growth may lead to advantages as well as dilution. This discount was applied in the 2010 Review, when States were net lenders, not net borrowers as they are now.⁵ While States have articulated arguments for population growth leading to revaluations of financial assets, there have been no arguments that population growth leads to revaluations of financial liabilities. Therefore, the discount is no longer appropriate as there is no longer any uncertainty over the impact of population growth.

REDISTRIBUTION FROM AN EPC ASSESSMENT

- 20 Table 5 shows the extent to which the assessment for this category differs from an EPC assessment of net borrowing. The redistribution reflects the interstate differences in population growth rates and negative net financial assets in 2017-18. When States hold net financial liabilities (negative net financial assets) population growth reduces the per capita value of those liabilities. The reduction is greater for States with above average population growth and their GST requirements are reduced. The GST requirements of States with below average growth are increased.
- 21 In per capita terms, Western Australia, South Australia and the Northern Territory experience the largest redistributions.

Table 5 **Redistribution from an EPC assessment, Net borrowing, 2017-18**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	12	-138	-8	68	53	10	-8	11	154
\$ per capita	2	-22	-2	26	31	19	-18	44	6

Note: The redistribution is the difference from an EPC assessment of category expenses.

Source: Commission calculation.

UPDATING THE ASSESSMENT

- 22 As required by the terms of reference, the Commission will incorporate the latest available data in the assessment during the annual updates. This will allow the assessment to reflect changes in State circumstances.

⁵ In the 2010 Review holdings of transport and housing PNFCs were regarded as financial assets, leading to total financial assets being larger than total liabilities. Since the 2015 Review these holdings have been regarded as physical assets, and under this definition States hold more liabilities than financial assets.

- The following data will be updated annually:
 - net borrowing and net financial assets
 - total State population.

OUTSTANDING ISSUES

- 23 From the Commission’s perspective, there are no outstanding issues for this assessment.

FURTHER CONSULTATION

- 24 Before the release of the final report by 28 February 2020, there will be opportunities for consultation on this assessment. For further information about this category, please contact Carrie Dreese on carrie.dreese@cgc.gov.au.

ATTACHMENT 23

ADMINISTRATIVE SCALE

Summary of proposed changes to the 2015 Review methodology

- The estimate of total administrative scale expenses for 2017-18 has increased by 27%, from \$2.2 billion to \$2.8 billion.
- The Northern Territory dual service delivery adjustment has been removed. However, an adjustment of \$1.8 million for the Northern Territory has been included to recognise a difference in its organisational structure requiring additional engagement with Indigenous stakeholders for policy development and coordination.
- The wage costs proportion of administrative scale expenses has been reduced from 80% to 60%.

- 1 This attachment contains the Commission's draft proposals for the administrative scale assessment following consultation with the Commonwealth and States.

DEFINITION OF ADMINISTRATIVE SCALE

- 2 The administrative scale disability recognises the costs States incur in delivering services which are independent of the size of the service population. Put another way, it seeks to measure unavoidable operating costs, incurred prior to the delivery of services to users. They include costs associated with:
 - core head office functions of departments (for example, corporate services, policy and planning functions, but not all head office costs incurred in delivering the services)
 - services that are provided for the whole of the State (for example, the legislature, the judiciary, the treasury, the revenue office, and a State museum, but not all staffing and other resource costs incurred in delivering them).
- 3 Administrative scale is not an assessment of all fixed costs or 'head office type costs'. It is an assessment of minimum fixed costs which do not vary with service populations. All remaining fixed costs are part of the service delivery expenses of each category and assessed according to the category disabilities.

Conceptual case for administrative scale costs

- 4 States with small populations have intrinsically higher per capita costs because the minimum functions of government are spread over a smaller number of residents. The administrative scale assessment provides an allowance for this influence.
- 5 As the administrative scale assessment reflects the costs of providing services which are independent of the size of the service population, each State has essentially the same requirement.

ASSESSMENT APPROACH AND CALCULATIONS

- 6 Table 1 shows the administrative scale assessed expenses for 2017-18 for each State by category. The total administrative scale expenses are just over 1% of total State operating expenses.

Table 1 Illustrative assessment, administrative scale, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Schools education	21	21	21	21	21	21	21	21	170
Post-secondary education	11	11	11	11	11	11	11	11	90
Health	40	40	40	40	40	40	40	40	318
Welfare	13	13	13	13	13	13	13	13	106
Housing	13	13	13	13	13	13	13	13	106
Services to communities	29	29	29	29	29	29	29	29	233
Justice	48	48	48	48	48	48	48	48	384
Roads	12	12	12	12	12	12	12	12	96
Transport	10	10	10	10	10	10	9	10	79
Services to industry	33	33	33	33	33	33	23	33	256
Other expenses	122	122	122	122	122	122	122	124	980
Total	354	354	354	354	354	354	342	355	2 819

Note: Estimated scale costs for 2016-17 scaled to 2017-18 using the change in the ABS State and local government final consumption deflator.

Source: Commission calculation.

- 7 The proposed estimates reflect a detailed examination of the services States provide and the organisational structures used to provide them. As such they take account of changes in services provided and necessary resources since the administrative scale costs were last estimated in the 2004 Review.
- 8 The Commission proposes to keep the administrative scale expenses up-to-date in updates following the 2020 Review by indexing them using the ABS State and local government final consumption (SLGFCE) deflator. This is the same approach as was adopted in the 2015 Review. All States that commented supported the proposal.

- 9 The wage costs factor will be applied to the wages portion of expenses, which is estimated to be 60% of total administrative scale expenses.
- 10 The Commission proposes to retain the 2015 Review presentation of assessing all administrative scale expenses as a component in the Other expenses category. Most States that commented supported this.

Assessed expenses calculations

- 11 Table 2 shows the calculation of total assessed expenses for administrative scale in 2017-18.

Table 2 Illustrative assessment, administrative scale, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Total administrative scale expenses (\$m)	354	354	354	354	354	354	342	355	2 819
Wage costs factor	1.005	1.003	0.996	0.994	0.976	0.972	1.045	1.028	1.000
Assessed expenses (\$m)	355	354	351	350	344	343	357	365	2 819
Assessed expenses (\$pc)	45	55	71	136	199	653	857	1 477	114

Source: Commission calculation.

ASSESSMENT ISSUES

- 12 The 2015 Review assessments provided the starting point for the 2020 Methodology Review. In April 2018, Commission staff released a draft assessment paper setting out staff proposals for the administrative scale assessment. States provided submissions on the proposals. The staff proposals and State submissions are available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).
- 13 The main assessment issues for the assessment were:
 - whether to retain the 2015 Review definition of administrative scale
 - whether to re-estimate administrative scale costs for each expense category, using the 'bottom-up' and 'top-down' approaches
 - adjustments to the ACT's scale expenses to reflect its lower spending needs in some areas
 - whether to retain the adjustments for the Northern Territory to recognise a difference in its organisational structures
 - the validity of the assumption that employee expenses are 60% of total administrative scale costs.
- 14 States supported a comprehensive review of administrative scale costs because those costs had not been re-estimated since the 2004 Review.

15 The following sections discuss the main issues, including State views.¹

Scale definition and concept

16 The Commission has decided to retain the 2015 Review definition of administrative scale. The definition has the support of most States.

17 Western Australia said that States with smaller populations may not be able to operate at an optimal level, resulting in diseconomies of small scale. This issue has, however, been investigated in previous reviews and the results were inconclusive because of data limitations. The Commission does not think it possible to collect sufficiently detailed information from States for analysis, based on the information already collected for the review of administrative scale costs. It would be impractical to identify the optimal scale of operations and to quantify any disability. Any attempt to quantify any disability would necessarily involve significant Commission judgment. Western Australia did not suggest a way forward.

Re-estimating scale costs

18 Similar to the approaches used in the 1999 and 2004 Reviews, the Commission has re-estimated administrative scale costs through two main approaches:

- deriving a basic structure and staffing for any given department/function and costing it (the 'bottom-up' approach)
- making estimates by reference to the size of head offices and whole of State services in the smallest States, after removing any staffing/expenses considered inconsistent with the average minimum structure (the 'top-down' approach).

19 The bottom-up approach consists of building the minimum size head office from the ground up. It involves four main steps:

- determining the average machinery of government (for a function, such as health, this covers the average departmental structure and the main related agencies)
- identifying the common functions, such as corporate services, in each agency
- applying a stylised average minimum structure and minimum staffing numbers for the common functions
- ascribing an average cost per employee, including overheads, to apply to the minimum staffing structure.

20 Commission staff provided States with preliminary estimates of administrative scale costs for most functions and the information used to derive the estimates. The staff's

¹ State submissions often include significant detail and supporting evidence. In this attachment, The Commission responds to the arguments and evidence States presented in their submissions. For the full detail of State submissions, see the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

preliminary estimates were reviewed in light of State comments and information provided by States in response to a staff data request.

- 21 Estimates have now been derived for the remaining functions — roads, transport, services to communities and some minor functions not already covered: local government services and emergency.
- 22 While the derivation of the administrative scale cost estimates involve judgment (mostly regarding the minimum staffing numbers), the Commission has applied the same approach and used the same assumptions for each function.
- 23 The updated estimates are higher across all categories than those based on the 1999 and 2004 Review work. This is to be expected given increasing levels of collaboration between the Commonwealth and State governments in a number of spheres, greater legislative and reporting requirements and changes in the nature and use of information and communications technology (ICT).² The proposed administrative scale expenses represent a 27% increase compared with those of the 2019 Update (\$2.8 billion and \$2.2 billion, respectively).
- 24 All States supported the re-estimation of the administrative scale costs and generally agreed with the proposed approaches. States noted that administrative scale costs were last estimated in the 2004 Review.
- 25 New South Wales argued that the proposed approach to estimating administrative scale costs is not sufficiently reliable and its integrity cannot be tested. It also considered that the administrative scale estimates represented an implausibly high proportion of expenses in the three smaller States for some categories, notably Services to industry and Other expenses. While it is not disputed that there is a grey area in terms of the appropriate staffing numbers especially at the lower levels of head office structures, the Commission has adopted a conservative approach, based on what States do on average. Also, the Services to industry and Other expenses categories have a high proportion of State-wide functions such as treasury, parliament, industry regulation and tourism agencies.
- 26 Queensland argued that junior staff should not be included in the administrative scale costs, but did not explain why. The administrative scale cost is meant to cover all the relevant head office type activities. For example, payroll services are usually provided by junior staff and appropriate staffing for such functions should be recognised in the scale estimates.
- 27 Tasmania, the ACT and the Northern Territory considered that the staffing level estimates were too low compared with State actual head office staff numbers. For example, data from Tasmania suggest that there are 62 FTE (full time equivalent) staff

² The 1999 and 2004 Review estimates also drew heavily on a more detailed investigation of the structure of education departments and police departments using annual reports and other related material, in deriving the estimates for the remaining categories.

working in payroll in its Department of Health and Human Services. However, State staffing numbers are influenced by the size of the service delivery functions (for example, number of schools and hospitals). The scale estimates would only include one or two staff depending on the number of divisions and branches in a service delivery function (health, welfare and housing) covered by a particular payroll unit. Reassuringly, the Commission notes that the scale staffing number estimates provided by Tasmania and the ACT for a number of head office functions are similar to its estimates.

- 28 The preliminary estimates recognised ICT costs in each government function through the inclusion of one section of four staff. However, the review of State-provided detailed organisational structures and staffing numbers indicated that an additional ICT section that captured data and reporting should be included and the associated costs have now been included in the estimates.
- 29 The preliminary staffing number estimates for the treasury function included a chief ICT officer responsible for whole-of-government ICT policy. A section of four staff, under the ICT chief officer, has now been added to the treasury function to reflect the importance of ICT in the provision of government services. The preliminary estimates already incorporated depreciation expenses, including those relating to ICT, as well as the average payments to non-government ICT providers.
- 30 For costing the preliminary estimates, staff used the analogous Commonwealth employees' salaries discounted by 10%. Based on salary information from five States (Victoria, South Australia, Tasmania, the ACT and the Northern Territory), a discount of 3% is now used. While average State salaries could instead be used to calculate scale costs, the Commission intends to use the Commonwealth salary structure as a basis because:
 - there are some uncertainties about whether individual State employee levels have been classified consistently
 - the integrity of the salaries in relation to each level would be retained.

Adjustment for the ACT

- 31 The Commission proposes to continue to adjust the ACT's scale expenses to reflect its reduced spending needs for Indigenous communities, non-urban transport, primary industries and mining.
- 32 States that commented, including the ACT, supported the proposal.
- 33 These adjustments reduce the scale fixed costs for the ACT by \$11.3 million, from \$353.5 million to \$342.3 million.

Table 3 Adjustments to the ACT’s administrative scale expenses, 2017-18

	Amount
	\$m
Services to communities (Indigenous community development)	0.6
Transport	0.8
Services to industry (primary industries and mining)	9.9
Total	11.3

Source: Commission calculation.

Adjustment for the Northern Territory

- 34 Adjustments for the Northern Territory were made in the 2015 Review in the areas of education, health, welfare and housing services in recognition of its dual service delivery models for its Indigenous and non-Indigenous residents. However, the review of the education and health head office functions suggested that States have elevated the focus on Indigenous services and most States now appear to provide services specifically designed to meet Indigenous needs. Accordingly, the proposed stylised head office structure for the education and health functions now includes an Indigenous services role. The case for a Northern Territory adjustment was less clear, at least for the education and health functions.
- 35 The Northern Territory argued for all the adjustments to be retained and additional ones for the Department of the Chief Minister (DCM) and the Northern Territory Police in recognition of Indigenous specific functions, particularly in relation to regional coordination and engagement with remote Indigenous communities.
- DCM supports all levels of government, regional stakeholders and Indigenous communities through its Office of Aboriginal Affairs, Aboriginal Land Strategic Policy and Regional Network functions (combined staffing of over 50 FTE).
 - Policing in the Northern Territory’s Indigenous communities differs from that of other States because of the heterogeneity of the remote Indigenous communities, their extent (in proportionate terms) and the issues of distance and isolation that mean solutions to problems and policing models are different in the Northern Territory and also differ between communities within the Northern Territory.
- 36 The Northern Territory did not contest that most States now have a greater focus on Indigenous needs. However, the Northern Territory argued that its needs for Indigenous specific services go deeper than in other States because it has such a high proportion of Indigenous people and Indigenous people in remote areas. Furthermore, the Northern Territory has moved beyond having some Indigenous specific functions in head offices. Its mainstream services are marked by an Indigenous/non-Indigenous duality, as Indigenous and remote people are often the predominant client base. This duality is reflected in strategies, policies, plans and service delivery approaches. As a result, the level of additional resources required to

develop service delivery models for the Indigenous population are not always easily identified within head office structures.

- 37 The Commission recognises the Northern Territory's complex Indigeneity related issues and that they affect how services are delivered. However, many of the examples provided by the Northern Territory to underpin its case described service delivery costs, which are recognised in the expense category assessments.
- 38 The Commission considers that it is now average policy for States to recognise Indigenous priorities in policy formulation and service delivery strategies. As such, the Commission intends to cease the Northern Territory adjustment for dual service delivery. However, it has decided to retain a small adjustment to recognise the additional costs faced by the DCM in engaging with Indigenous stakeholders for policy development and coordination. The Commission considers that the level of engagement with Indigenous communities reflects the centrality of Indigenous people in the provision of government services in the Northern Territory. An administrative scale cost adjustment for the Northern Territory of \$1.8 million has been included, based on one branch led by a senior executive and two sections of four staff.

Employee/non-employee costs

- 39 The estimation of the minimum staffing structures for the stylised departments and agencies is the basis for the calculation of employee costs (essentially wages and superannuation). Non-employee costs were calculated separately and were estimated to be 40% of total expenses. Non-employee costs were previously estimated to be 20% of total expenses. This 60:40 split between employee and non-employee costs was also used as the proportion to which the wages costs factor should apply.
- 40 The Commission collected employee and non-employee cost data from States. However, the data were not sufficiently comprehensive and consistent across States to estimate the ratio of employee related expenses to total expenses.
- 41 Instead, the Commission estimated non-employee costs by examining expenses across the States using annual reports.
- 42 Table 4 shows employee expenses as a proportion of total expenses for the selected agencies.³ The table indicates that across States, employee expenses in those agencies varied between about 57.7% of total expenses in the ACT to 67.9% in New South Wales. On average across all States and all the selected agencies, employee expenses were 63.9% of total expenses.

³ Total expenses exclude grants and subsidies made by the agency and in Victoria's case, capital asset charges.

- 43 This figure is increased by the inclusion of police departments where total costs are very largely attributable to the costs of State-wide service delivery activities. Such activities are expected to have staff and salary profiles that are quite different from those in the central office leadership, administrative and policy areas, which are the focus of administrative scale costs. If police department figures are excluded from the calculations, the average proportion becomes 54.6%.
- 44 The figures indicate the assumption used in estimating scale costs that employee expenses represent 60% of total departmental expenses is reasonable.

Table 4 Employee expenses as percentage of agency total expenses, 2016-17

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	%	%	%	%	%	%	%	%	%
Treasury	66.5	58.4	56.1	64.9	55.1	71.0	52.1	51.2	57.5
Finance	50.5	0.0	0.0	35.1	0.0	0.0	0.0	0.0	47.2
Premier's Department	62.2	59.0	38.0	53.0	52.7	55.6	0.0	60.4	54.1
Parliamentary departments	68.9	58.4	65.0	81.2	0.0	78.5	64.5	56.9	66.5
Police Department	81.2	78.6	76.1	75.3	80.6	72.6	64.9	78.7	78.3
Justice/Attorney General's Department	64.7	45.8	52.6	49.7	68.7	64.4	68.5	51.3	56.2
Corrective services	0.0	0.0	0.0	50.1	60.9	0.0	0.0	0.0	52.8
Office of public prosecutions	78.3	0.0	82.5	73.7	0.0	80.0	0.0	0.0	78.3
Court services	0.0	63.3	0.0	0.0	55.6	0.0	0.0	0.0	61.8
Departments of development and/or industry	51.9	46.2	28.8	58.0	56.9	58.7	41.0	76.6	47.9
Departments of primary industry/natural resources	0.0	0.0	51.4	62.6	59.0	70.1	0.0	60.0	56.9
Tourism agency	25.1	77.8	0.0	27.9	33.2	58.2	0.0	20.8	32.6
Education Department (Corporate areas only)	0.0	70.4	0.0	0.0	0.0	0.0	0.0	77.9	72.4
Total	67.9	63.5	60.6	59.8	67.2	66.5	57.7	63.5	63.9
Total excluding police	59.2	51.2	50.1	51.9	57.9	63.8	55.5	55.0	54.6

Note: In most cases where a zero appears in the table, the agency does not exist in the State and comparable expenses are in the figures for other agencies. For example, New South Wales and Victoria did not have separate primary industry or natural resource departments in 2016-17 and the relevant expenses are part of those shown for Departments of development and/or industry. Agency total expenses exclude the value of grants and subsidies provided by the agency.

Source: Various States annual reports.

REDISTRIBUTION FROM AN EPC ASSESSMENT

- 45 Table 5 shows the extent to which the assessment of administrative scale expenses differs from an EPC assessment. States with a positive redistribution are assessed to have above average spending requirements and States with a negative redistribution are assessed to have below average spending requirements.

Table 5 Redistribution from an EPC assessment, administrative scale, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	-547	-373	-214	56	148	283	310	336	1 133
\$ per capita	-69	-58	-43	22	85	539	744	1 364	46

Note: The redistribution is the difference from an EPC assessment of assessment expenses.

Source: Commission calculation.

46 As the administrative scale assessment reflects the costs of providing services that are independent of the size of the service population, each State has essentially the same requirement. The appropriate assessment is therefore an equal per State assessment (with some minor adjustments for the ACT and the Northern Territory), which implies a greater per capita cost for the less populous States. The assessment therefore leads to a redistribution away from the three largest States to the other States, with the largest per capita redistributions being to Tasmania, the ACT and the Northern Territory.

47 Table 6 provides a summary of the main disabilities contributing to the redistribution from an EPC assessment for this category.

Table 6 Major reasons for the redistribution, administrative scale, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Administrative scale	-548	-373	-211	60	157	294	295	327	1 132
Wage costs	1	0	-2	-3	-9	-11	15	9	25
Total	-547	-373	-214	56	148	283	310	336	1 133

Note: The redistributions from an EPC assessment are illustrative. Disabilities may not add due to rounding.

Source: Commission calculation.

UPDATING THE ASSESSMENT

48 The administrative scale expenses will be kept up-to-date in updates following the 2020 Review by indexing them using the SLGFC deflator.

OUTSTANDING ISSUES

49 From the Commission's perspective, there are no outstanding issues for this assessment.

FURTHER CONSULTATION

- 50 Before the release of the final report by 28 February 2020, there will be opportunities for consultation on this assessment. For further information about this assessment, please contact Marc Boisseau on marc.boisseau@cgc.gov.au.

ATTACHMENT 24

WAGE COSTS

Summary of proposed changes to the 2015 Review methodology

- Due to the timing of the release of a new ABS data set, the Characteristics of Employees survey (CoES), the 2015 Review of the Wage costs assessment was deferred until the 2016 Update. The proposed assessment does not differ from the methodology adopted in the 2016 Update and finalised in the 2017 Update.

- 1 This attachment contains the Commission's draft proposals for the Wage costs assessment following consultation with the Commonwealth and States.

OVERVIEW

- 2 State governments employ about one in 10 Australian workers. Wages and salaries represent the largest component of recurrent State expenditure and account for a significant share of expenses in nearly every expense category. The Wage costs assessment addresses a global disability, rather than the expenses associated with an individual category of service delivery (such as schools or health spending).

ASSESSMENT APPROACH

Wage costs

- 3 Using data from the Characteristics of Employees survey (CoES), the Commission models the wages of the average private sector worker in each State, controlling for differences in the characteristics of that worker that are known to affect wage levels, such as work experience and qualifications. The model also adjusts for differences in the composition of industry and occupations in each State.
- 4 An additional variable for State of residence allows the Commission to estimate the influence that State of residence has on the wages of comparable individuals.

The wages paid to comparable private sector workers are used as a proxy for the pressures on public sector wages in each State.

5 Table 1 shows the modelled outcomes for 2014-15 to 2017-18.

Table 1 Relative private sector wages, 2014-15 to 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
	%	%	%	%	%	%	%	%
2014-15	0.8	-1.3	-1.5	6.8	-4.2	-7.8	2.9	8.0
2015-16	0.1	-1.4	-0.2	4.8	-2.2	-6.1	4.9	5.2
2016-17	0.2	-0.9	-1.0	4.5	-1.9	-7.3	6.3	5.7
2017-18	0.9	0.6	-0.6	-1.1	-4.0	-4.6	7.6	4.7

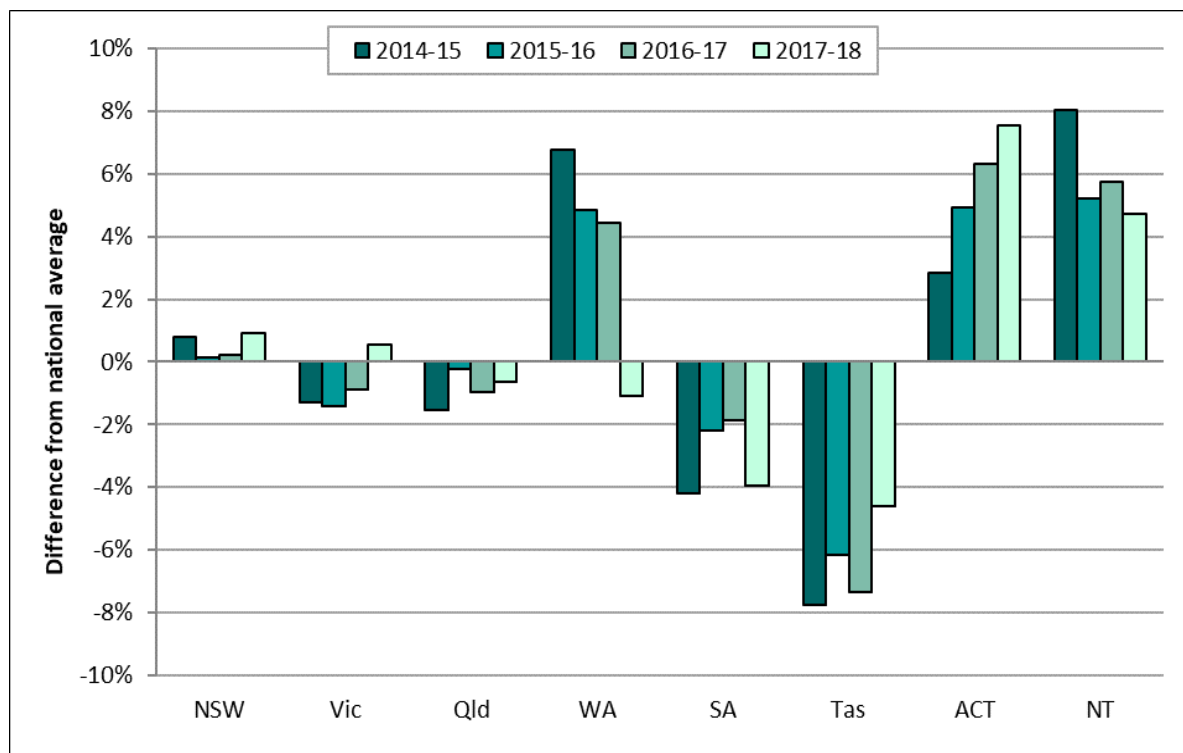
Note: The modelled outcomes are expressed relative to the national average wage level.

Source: Commission modelling based on CoES.

6 The modelled outcomes are then discounted by 12.5%.¹ Figure 1 shows the discounted modelled outcomes produced for 2014-15 to 2017-18. New South Wales, the ACT and the Northern Territory were assessed to have above average wage costs in all years. Victoria and Western Australia had above average and below average assessed wage costs over the period. The other States were assessed to have below average wage costs.

¹ The Commission intends to apply a low discount to the modelled outcomes because of some uncertainty about how accurately the data capture wage costs, how accurately the model controls for productivity differences and how well private sector wages proxy public sector wage pressures.

Figure 1 Discounted modelled outcomes, 2014-15 to 2017-18



Note: A 12.5% discount has been applied.

Source: Commission modelling based on CoES.

- 7 The discounted modelled outcomes are applied to the proportion of expenses in each category attributable to wage costs. Table 2 shows the wage costs proportion for each category, averaged across 2014-15 to 2017-18. Those proportions are based on the latest available Government Finance Statistics (GFS) data. The Commission intends to calculate the proportions using data for 2015-16 to 2018-19 in the 2020 Review and to keep those proportions fixed in subsequent updates, since they are relatively stable across years.
- 8 The Commission intends to continue to set the wage proportions in Housing, Roads and Transport to the average of the other categories, since a significant amount of wage expenses in these categories are classified as other types of expenses, such as payments to contractors.

Table 2 Wage costs by category, 2014-15 to 2017-18 averages

Category	Wage expenses	Non-wage expenses	Proportion	Assessed proportion
	\$'000	\$'000	%	%
Schools	27 575 843	7 213 576	79.3	79.3
Post-secondary education	3 243 966	2 421 596	57.3	57.3
Health	42 433 727	21 854 047	66.0	66.0
Housing	549 575	969 771	36.2	63.3
Welfare	4 446 485	8 043 566	35.6	35.6
Services to communities	2 336 327	2 959 977	44.1	44.1
Justice	13 742 313	5 124 726	72.8	72.8
Roads	1 710 192	3 875 134	30.6	63.3
Transport	966 774	6 139 273	13.6	63.3
Services to industry	2 594 568	2 500 060	50.9	50.9
Other expenses	7 909 547	10 345 879	43.3	43.3
Total excluding Housing, Roads and Transport	104 282 776	60 463 427	63.3	63.3

Note: Proportions for Housing, Roads and Transport have been set to the average of all other categories. The wage proportion of administrative scale expenses is set at 60%.

Source: GFS expenses from the ABS.

9 The Commission intends to continue to use the relative wage costs produced in this assessment (in combination with the regional cost assessment and Rawlinson's construction costs indexes) to calculate capital cost disabilities in the Investment assessment. For a description of the Investment assessment, see Attachment 21 — Investment.

10 Table 3 sets out the influence measured by the Wage costs assessment.

Table 3 Proposed Wage costs assessment, 2020 Review

Disability	Influence measured by disability
Wage costs	Recognises the additional cost to States with higher wage levels for reasons beyond their control. These costs are estimated using an econometric model run on ABS CoES data.

ASSESSMENT ISSUES

11 The 2015 Review assessments provided the starting point for the 2020 Review. In April 2018, Commission staff released a draft assessment paper setting out staff proposals for the Wage costs assessment. States provided submissions on the proposals. The staff proposals and State submissions are available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

12 The main assessment issues for the assessment were:

- the conceptual basis for the assessment
- the specification of the econometric model and interpretation of its results
- the volatility of the modelled outcomes
- the level of discount applied
- State specific adjustments to the modelled outcomes
- a category specific wage costs adjustment for Health.

13 These issues are considered below, including State views.²

The conceptual basis for the assessment

14 States raised three different concerns regarding the conceptual basis for the assessment.

National labour markets

15 Victoria and South Australia cited the report of the consultants engaged by the Commission in its review of the assessment in the 2016 Update.³ In particular, they pointed to the consultants' observation that States may compete for workers in local labour markets and national labour markets simultaneously. They said the premise that wage pressures beyond the control of States are solely (or predominantly) due to State-specific factors can no longer be sustained, and the assessment methodology should be revised.

16 Western Australia, the ACT and the Northern Territory disagreed with the view that any influence of national markets meant the assessment was flawed. Western Australia reiterated its argument that if a State pays a 'national market' wage that is above what the local market dictates, it will be able to employ more productive workers, allowing either cost savings or a higher standard of service. The ACT said that, if labour mobility between States was low, national markets would have little influence on wage levels. However, it said the existence of national labour markets in no way precluded premiums or discounts to the national average which represent differences between States in locational costs and amenities.

17 The Northern Territory said Census data showing relatively little interstate movement between public sector workforces did not support the argument that States primarily compete among one another for workers. While the Northern Territory had a greater reliance on non-local workers than other States, it did not seek to be a wage leader or

² State submissions often include significant detail and supporting evidence. In this attachment, the Commission responds to the arguments and evidence States presented in their submissions. For the full detail of State submissions, see the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

³ Mavromaras, K, Mahuteau, S, Richardson, S, and Zhu, R. *Public-private wage differentials in Australia: What are the differences by State and how do they impact GST redistribution decisions*, National Institute of Labour Studies, Flinders University, 2016.

set levels based on national levels; rather its base level of wages reflected local conditions.

- 18 The Commission continues to observe differences in the wages paid to public sector employees in the same occupations in different States. It has not changed its view that these differences are likely to arise from both policy choices and influences beyond States' control.
- 19 The Commission has previously referred to economic theories that can explain the persistence of differences in nominal wages for comparable private and public sector employees across regional labour markets. Those theories include compensating differentials, macroeconomic factors, attachment to state and migration costs.⁴ The theories provide conceptual reasons why observed differences in public sector wages may not necessarily reflect policy choice alone and can persist over time.
- 20 Mavromaras *et al.* found that States compete in two markets simultaneously – the national labour market and the local labour market. But they also found that comparable State employees are paid different wages in different States.⁵ If, as South Australia has argued, States set public sector wages solely (or principally) with regard to those in other States, the Commission would expect to see some convergence in public sector wages across States. This is not what it observes from the available data.
- 21 Further, while South Australia argued States compete for workers in job specific (national) labour markets, it did not provide evidence that the private sector does not also face similar competition. To the extent that the private sector also competes in the two markets simultaneously, the effects on wages will be reflected in the Commission's model.
- 22 The Commission's previous analysis of Census data showed that 60% of people joining State public services between 2006 and 2011 moved from the private sector in their State, while only 3% moved from the State public service in another State. This suggests that the direct impact of competition for labour from other sectors within a State appears to be stronger than the impact of a national labour market for State public service employees. In the absence of strong evidence for the influence of national markets and a sound method for measuring the impact of that influence, the Commission does not intend to make any changes to the assessment in respect of the national labour market argument.

⁴ See *Report on GST Revenue Sharing Relativities, 2016 Update*, Chapter 3 — Wage costs.

⁵ The Mavromaras *et al.* finding was based on data from the Household Income and Labour Dynamics in Australia (HILDA) survey, providing corroborating evidence for the results of the Commission's econometric model.

Private sector wages as a proxy for public sector wage pressures

- 23 Queensland and South Australia argued that private sector wages are not a good proxy of public sector wage pressures. Queensland said the model, based on private sector wages, did not capture pressures on public sector wages, such as the cost of living or the ability to attract employees to remote regions. South Australia said that private sector wage movements alone are unlikely to determine movements in wages for the majority of public sector employees (for example, nurses and teachers). It said that, with a few exceptions in highly specialised fields, the public sector is not forced to pay private sector wages, and that public sector wage outcomes reflect movements in national markets and State fiscal strategies.
- 24 Western Australia and the ACT disagreed. Western Australia considered that the relationship between public and private sector wages is likely to hold in the long term, even though movements in public sector wages often lag those in the private sector. The ACT pointed to the strong correlation between public and private sector wages (0.83) in the econometric results for the 2016-17 CoES.
- 25 Mavromaras *et al.* found that public sector wages respond to the same pressures as private sector wages (albeit with a lag). Figure 2 and Figure 3 (and similar data for earlier years) show that, while the strength of the relationship between public and private sector relative wage levels varies over time, the relationship is positive, consistent with the Mavromaras *et al.* finding.
- 26 South Australia argued that, with a few exceptions, the public sector is not forced to pay private sector wages. The Commission recognises that States retain a degree of policy control over the wages of its employees and bases its assessment on relative private sector wages to ensure policy neutrality. However, the evidence suggests that States, for reasons beyond their control, face the same wage pressures as their local private sector. It is the impact of those wage pressures that the assessment aims to measure.
- 27 In relation to the Queensland argument that the model does not pick up pressures arising from differences in the cost of living, the Commission observes that, to the extent that cost of living differences drive differences in the private sector wages, they are reflected in the assessment. To the extent that States pay additional compensation to attract workers to remote areas, it is captured in the regional costs assessment.

Comparability of public sector workers across jurisdictions

- 28 South Australia re-prosecuted its argument that public sector workers are not truly comparable across States. It argued that highly skilled and ambitious individuals leave smaller States for States with larger labour markets and, therefore, greater and more

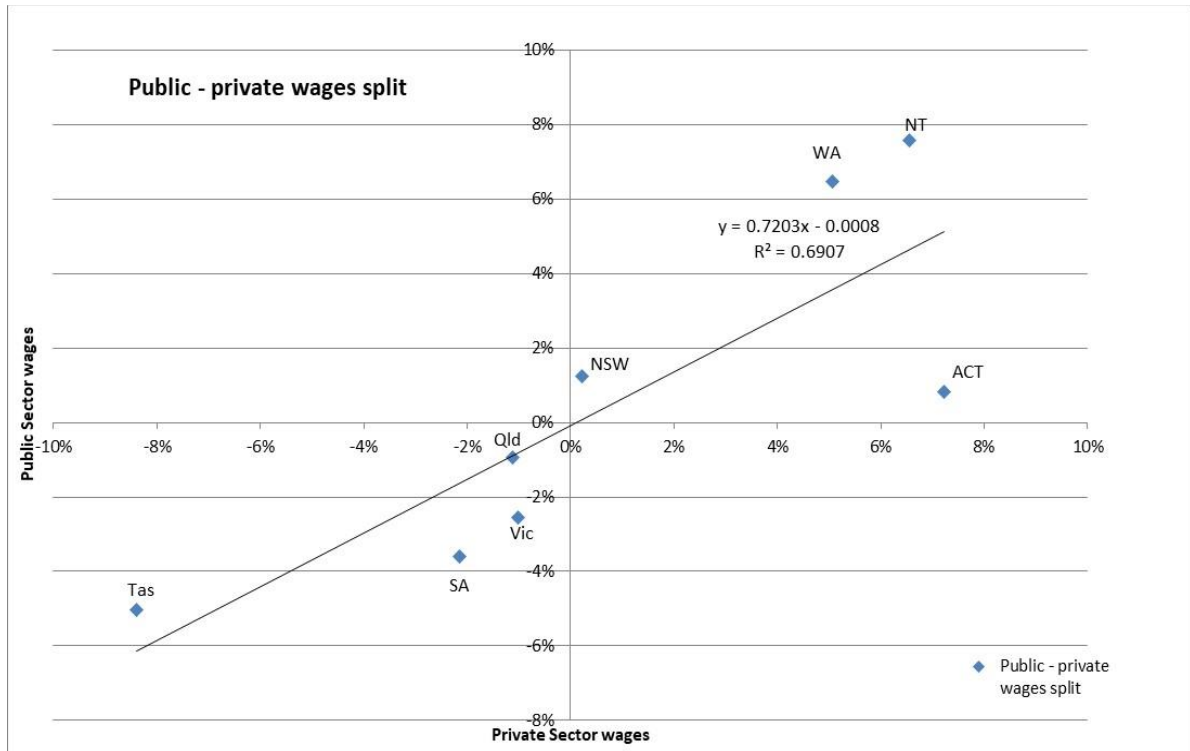
diverse employment opportunities. This meant governments in larger States may have access to a relatively more productive labour supply than smaller States.

- 29 The ACT maintained that a concern over productivity differences is unfounded as the model controls for all the major factors driving productivity differences between workers.
- 30 The econometric model used in the assessment has previously been compared by the Commission to a similar model based on the Household, Income and Labour Dynamics in Australia (HILDA) data that included measures of cognitive ability, achievement motivation, personality scales and health status. That comparison gave no indication that the exclusion of those variables from the Commission's model introduces a bias for any State or, in most cases, to a materially different distribution.

The specification of the econometric model and interpretation of its results

- 31 Victoria and Western Australia both raised concerns over the specification of the econometric model, in relation to the appropriateness of the number of variables included and the significance of the results.
- 32 The inclusion of a large number of variables in the Commission's model reduces the possibility that relevant variables may be omitted and increases the accuracy of the modelled estimate. While the data source differs from that used in the 2010 Review assessment, the specification of the variables is very similar. The consultants engaged in the 2010 Review regarded the Commission's approach to modelling wages as standard when judged against the large body of wage regressions estimated previously for Australia, and said it was econometrically sound and fit for purpose.
- 33 The Commission considers there is a sound conceptual case for the assessment and that the divergence of private sector wages from average is an appropriate, policy neutral indicator of how public sector wages in each State would diverge from the average (for reasons beyond the State's control).
- 34 Figure 2 shows a positive relationship between relative wages in the public and private sectors in the 2016-17 CoES regression results. The relative public sector wages were estimated using the same approach used for the private sector. It should be noted, however, that the public sector results are affected by States' policy choices.

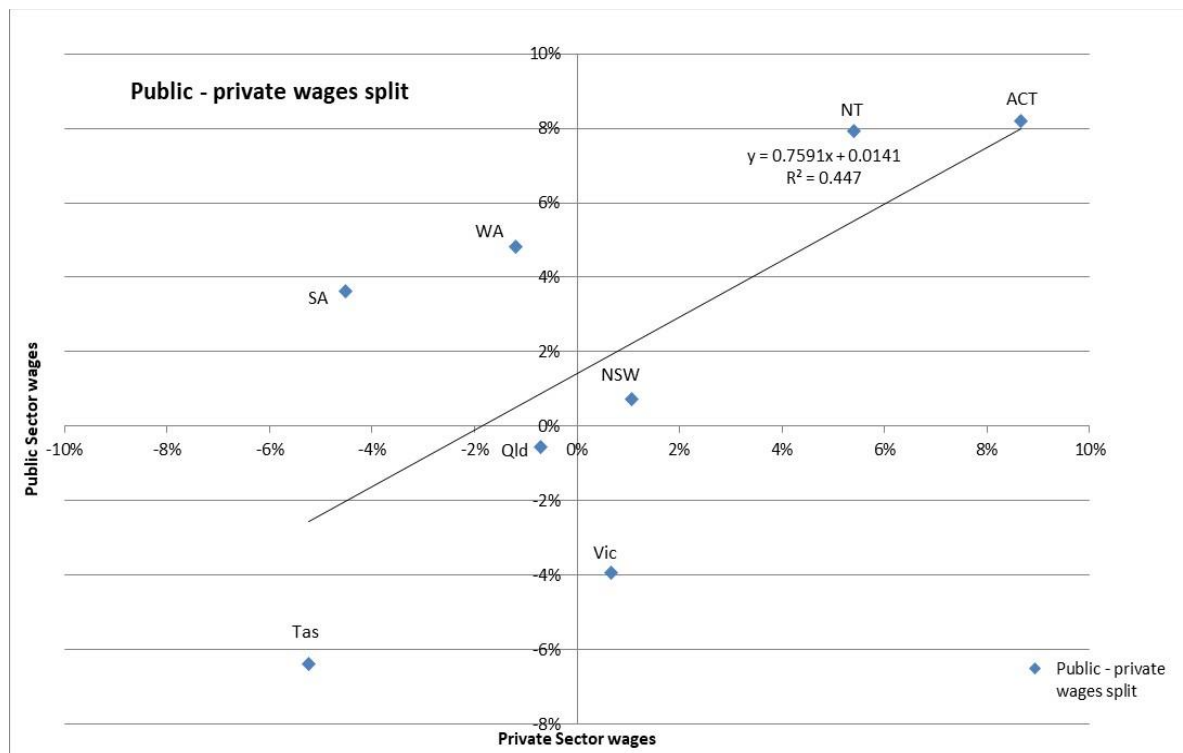
Figure 2 Public and private sector relative wages, 2016-17



Source: 2016-17 CoES regression results.

- 35 Figure 3 shows, that for the 2017-18 CoES regression results, the relationship between relative wages in the public and private sectors weakened, but remained positive. While the strength of the relationship between public and private relative wage levels shows some variation year to year, there has been a strong positive relationship over a number of years.
- 36 Movement of State estimates through the top left or bottom right quadrants is consistent with periods of transition between above average wage levels and below average wage levels. Mavromaras *et al.* found that public sector wage movements generally lag private sector wage movements.

Figure 3 Public and private sector relative wages, 2017-18



Source: 2017-18 CoES regression results.

- 37 The Commission considers that the econometric model produces the best available estimate of differences in wage costs between States.

Volatility of the modelled outcomes

- 38 Western Australia was concerned that the decline of approximately six percentage points in its relative private sector wage levels between 2016-17 and 2017-18 (prior to discounting) was unrealistic. It argued that the decline in its modelled outcome did not accord with the magnitude of the decline shown by other data.⁶
- 39 The change in the data source for the assessment in the 2016 Update, from the four yearly Survey of Education and Training (SET)⁷ to the annual CoES, meant the assessment would be more contemporaneous, but had the potential to produce more volatile outcomes year to year. The Commission has investigated approaches that impose additional smoothing of the modelled outcomes, over and above the three year averaging that applies to all assessments. The approaches examined

⁶ While the movement in the modelled outcomes and other available data sources such as average weekly earnings and the wage price index were of different magnitudes, they were all in the same direction. Average weekly earnings and the wage price index measure different concepts to the Commission’s wage costs model and, importantly, neither measure controls for the full range of differences between States in industry composition and worker characteristics.

⁷ The Commission previously used ABS data from the four yearly SET, indexed in between surveys using the wage price index (WPI). SET was discontinued by the ABS after 2009.

included using moving averages to determine the outcomes for each assessment year, weighted averaging and blending the modelled outcomes with the private sector wage price index (WPI). Each of these techniques reduces the volatility of the assessment, but also reduces contemporaneity. On balance, the Commission considers that using the modelled outcomes together with three year averaging provides the best measure of States' relative wage costs.

Discounting the assessment

- 40 Western Australia, the ACT and the Northern Territory argued that the low level discount (12.5%) applied to the assessment in 2015 Review should be removed. Western Australia said the discount will reduce the margin of error if the model overestimates wage costs differences, but will reduce the accuracy of the assessment if the model underestimates the wage costs differences. It presented comparisons with other ABS labour market data in support of its argument that the model appeared to be underestimating wage costs differences between States.⁸
- 41 Similarly, the Northern Territory considered that the assessment may understate its needs, since it did not take into account the additional two weeks leave it had to provide as a recruitment and retention tool to attract interstate and overseas workers, or the productivity related impacts of high staff turnover in the Territory. It said the discount should be removed for all States or for the Territory.
- 42 The ACT said there was no longer a case for a general discount on grounds of data uncertainty or methodological issues. It said the CoES data used in the model were an improvement on the previous data. It argued that concerns over how accurately the model controls for productivity differences and how well private sector wages proxy public sector wage pressures were not well founded. It cited the strong correlation between private and public sector wages in the 2016-17 CoES results and that the model controls for industry and occupation composition, as well as variables that impact the productivity of individual workers.
- 43 Other States did not specifically comment on the discount.
- 44 The Commission uses discounts when it has concerns about an assessment method or the data it uses. A 12.5% discount has been applied to the Wage costs assessment since the 2010 Review.⁹ In adopting this discount, the Commission had regard to:
- how accurately the data measured wage costs
 - how accurately the econometric model controlled for differences in productivity

⁸ In response to the 2017-18 result, Western Australia presented comparisons with other datasets suggesting that the model was overestimating changes to the differences in wage costs between the States.

⁹ Earlier Wage costs assessments had smaller and larger discounts at different times.

- how well private sector wages can be used as a proxy for wage pressures in the public sector.
- 45 The Commission retained the 12.5% discount when it moved to CoES data in the 2016 Update, as it did not consider that the issues had markedly changed.
- 46 The Commission considers that the factors on which it based its judgment remain. It does not have evidence that the data or method systemically underestimate (or overestimate) the differences in wage costs between States. The Commission intends to continue to apply the 12.5% discount to the Wage costs assessment. The Commission notes that the discount also acts to reduce the volatility in outcomes from the assessment.

State specific adjustments to the modelled outcomes

- 47 Tasmania and the ACT argued for State specific adjustments to their modelled outcome.

Tasmania

- 48 Tasmania considered that its modelled outcomes were inconsistent with the results for other States and that its relative private sector wage level was outside the bounds within which public sector wages can reasonably lie. It was also concerned that the CoES data seemed to suggest a significant step change from earlier data. It argued that the Commission should discount Tasmania's modelled outcome by 50%.
- 49 The Commission last applied a State specific adjustment (25%) to Tasmania's modelled outcome in the 2010 Review, because it considered that constraints on the variation in public sector wages meant there were bounds within which those wages could lie. At that time, Tasmania's relative private sector wages were assessed as being 7.7% below average. The State specific discount was removed in the 2011 Update when the Commission decided that Tasmania's relative private sector wages were no longer outside the bounds within which relative public sector wages lie.
- 50 Tasmania is seeking a 50% adjustment to its modelled outcome, on the basis of its 2016-17 CoES modelled outcome (a modelled outcome of 8.4% below average; 7.1% below average after applying the discount). The 2017-18 CoES modelled outcome for Tasmania was 5.3% below average, prior to the discount. This is well within the bounds in which the Commission has previously viewed public sector wages can feasibly lie.
- 51 The Commission does not intend to make a State specific adjustment to the modelled outcome for Tasmania.

The ACT

- 52 The ACT argued for State specific adjustments to its modelled outcomes on two grounds:
- the influence of the Australian Public Service (APS) on wage levels in the ACT
 - the higher costs of the PSS scheme it inherited at the time of self-government.
- 53 The ACT also argued for the re-introduction of the Commonwealth Superannuation Scheme (CSS) adjustment that was removed in the 2017 Update, expanded to include the additional costs of the Public Sector Superannuation scheme (PSS). It said the costs associated with these schemes were outside its control.
- 54 In addition, the ACT considered that the large influence of the Australian Public Service on wage levels in the ACT meant that private sector wage levels do not fully reflect the wage pressures faced by the ACT Government.
- 55 Prior to the 2011 Update, the Commission made an adjustment to the modelled outcomes for the ACT to account for the impact of the APS on ACT Public Service (ACTPS) wage levels. The adjustment recognised that the SET data used in the assessment did not differentiate between levels of government and, therefore, could not be adjusted to include APS wages with those of the private sector. The adjustment was discontinued in the 2011 Update, when the Commission decided that SET private sector wages provided a reasonable proxy for the wage pressures faced by the ACT.
- 56 In support of its argument that this adjustment should be reinstated, the ACT has presented analysis of data from the 2016 Census and the APS Remuneration Report.
- Using income data from the 2016 Census, it showed a very strong correlation between APS and ACTPS employee weekly earnings, a moderate correlation between ACTPS and private sector earnings, and a weak correlation between APS and private sector earnings. It performed a similar analysis using mean annual earnings.
 - Using published remuneration data, it found base salaries for comparable administrative and senior officers in the APS and the ACTPS to be very similar.
- 57 The ACT's analysis of Census income data did not control for differences in worker characteristics and, therefore, was not comparing the earnings of comparable employees. It was also based on income not wages. The ACT's comparison of remuneration of administrative and senior officers covered head office staff, but these represent only part of the ACTPS, which also includes teachers and nurses, for example. Neither of these analyses strongly supported the case that the APS has an impact on ACTPS wage levels over and above its impact on private sector wages levels in the ACT. The Commission has previously concluded that, to the extent APS remuneration affects ACTPS remuneration, it will also affect private sector wages and be reflected in the assessment.

- 58 The second adjustment sought by the ACT is to recognise the above average costs of the PSS superannuation scheme. In the 2017 Update, after consulting the States, the Commission decided to discontinue the adjustment it made to the Wage costs assessment for the ACT and the Northern Territory to account for the higher costs to those States as a result of the CSS they inherited at the time of self-government.¹⁰
- 59 In its submission to the 2018 Update the ACT provided evidence in support of its view that the CSS adjustment should be reinstated and expanded to include the costs associated with the PSS. The ACT considered this evidence clearly established that the cost of the PSS had increased to a greater extent than similar schemes in other States. It said that the key issue was the degree of divergence between the costs of the PSS and other schemes, not the reasons for that divergence.
- 60 The Commission decided not to reintroduce the adjustment in the 2018 Update, as it would constitute a method change that should be considered as part of the 2020 Review. The Commission also considered that the ACT Government had control over its superannuation arrangements from the establishment of the ACTPS in 1994. It followed that any adjustment should only include the cost of contributing PSS members who became ACT Government employees prior to that time. Data provided by other States suggested that the cost of schemes similar to the PSS was also high. Together, these suggested that an adjustment was unlikely to be material.
- 61 Further, the Commission said it was inclined to move away from State-specific adjustments in its expenditure assessments, especially those introduced to recognise legacy issues in affecting the newly formed governments in the two self-governing Territories. It said the Territories could be expected to have matured sufficiently to be able to deal with historical happenstance, just as all other State governments have been expected to address their legacy issues.
- 62 The ACT questioned the presumption that it could be expected to have matured sufficiently to be able to deal with historical legacies. It said those legacies were fundamental to the legal and institutional design of the ACT and time has not ameliorated the fiscal impact of the special circumstances of the ACT on the ACT Government. It asked that the Commission reconsider its position on a PSS adjustment.
- 63 The Commission view has not changed since the 2018 Update, that after its establishment the ACTPS faced no legal requirement to maintain access to the PSS. While the ACT continues to allow CSS and PSS members who transfer from the APS to the ACTPS to maintain access to their superannuation schemes, an adjustment should only include PSS members who commenced employment with the ACT prior to the

¹⁰ Finalisation of the treatment of the CSS adjustment was delayed from the 2016 Update due to the Commission having insufficient time to consult with States following late identification that it would no longer be material.

establishment of the ACTPS on 30 June 1994 (and all CSS employees).¹¹ Based on data provided by the ACT, a PSS adjustment including the cost of those employees would not be material. Similarly, the combined PSS/CSS adjustment would not material.

- 64 The Commission does not intend to make a State specific adjustment to the modelled outcome for the ACT.

A category specific wage costs adjustment for Health

- 65 Western Australia argued that not all sectors are subject to the same wage pressures. It said a potential limitation of the current model is that it reflects the industry and occupation structure of the private sector rather than the public sector. It proposed a category specific wage cost adjustment to the Health assessment to recognise that wage pressures are much higher in its public health system than in the private system. It said it experienced unique workforce issues in the health sector, and higher wages than other States, due to shortages of nurses and medical practitioners.
- 66 While the current assessment takes into account the proportion of expenses in each category that relate to wage costs, it does not provide category specific adjustments where States argue they have higher than assessed wage expenses. Western Australia said its medical practitioners cost, on average, 16% more than those in New South Wales, Victoria or Queensland. This compared to the wage cost assessment in which relative wages in Western Australia were assessed to be about 3% above average in the 2019 Update.
- 67 It is difficult to determine whether the above average wages paid to Western Australian public health practitioners reflect a policy choice or a disability.
- 68 The Wage costs assessment assumes that relative private sector wages are an accurate reflection of the wage pressures facing each State Government and any relative public sector wages above that amount are the result of a policy choice. The assessment does not directly compare the wage levels of specific occupations or industries in different States. A category specific wage costs adjustment would be an attempt to do this.
- 69 It is not clear how the Commission would objectively differentiate between above average wage costs that reflect a genuine disability and those that reflect a policy choice. Given the likely increase in complexity of the assessment and need for Commission judgment, the Commission does not intend to adopt category specific wage cost adjustments.

¹¹ The CSS scheme was closed before the ACTPS was established.

REDISTRIBUTION FROM AN EPC ASSESSMENT

70 Table 4 shows the extent to which the assessment for this category differs from an EPC assessment of wage costs. States with a positive redistribution are assessed to have above average wage costs and States with a negative redistribution are assessed to have below average wage costs. In per capita terms, Tasmania, the ACT and the Northern Territory experienced the largest redistributions.

Table 4 **Redistribution from an EPC assessment, Wage costs assessment, 2017-18**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	364	184	-158	-139	-345	-122	158	59	764
\$ per capita	46	29	-32	-54	-200	-232	381	237	31

Note: The redistribution is the difference from an EPC assessment of wage costs.
 The redistribution varies from the 2019 Update results as it only includes a single assessment year and correspondingly only a single year of regression results.

Source: Commission calculation.

71 The main reason for these redistributions is the differences between States in their relative private sector wage levels.

UPDATING THE ASSESSMENT

72 As required by the terms of reference, the Commission will incorporate the latest available data in the assessment during the annual updates. This will allow the assessment to reflect changes in State circumstances. CoES data will be updated annually. The wage proportions will remain fixed until the next Review.

OUTSTANDING ISSUES

73 From the Commission's perspective, there are no outstanding issues for this assessment.

FURTHER CONSULTATION

74 Before the release of the final report by 28 February 2020, there will be opportunities for consultation on this assessment. For further information about this category, please contact Morgan Moa on morgan.moa@cgc.gov.au.

ATTACHMENT 25

GEOGRAPHY

Summary of proposed changes to the 2015 Review methodology

- Regional costs have been assessed directly in a broader range of categories than in the 2015 Review.
- For categories where a direct assessment has not been possible, a general regional costs gradient has been applied. The general gradient is based on the average of the regional cost gradients measured in Schools and admitted patients.
- Service delivery scale is measured using remoteness areas, rather than service delivery scale specific geography.
- The interstate non-wage cost assessment has been discontinued.

OVERVIEW

- 1 This attachment does not relate to a specific area of State spending, but to a driver or influence across a number of areas of State spending. The issue for the Commission is the approach to measuring that driver across the expense categories. The Commission aims to measure the GST required to equalise State fiscal capacities. This is achieved when States are provided with the capacity to provide comparable communities with the same (average) standard of service. An essential element of defining 'comparable communities' in this context is geographic characteristics.
- 2 There are three aspects of how geography influences State spending:
 - regional costs and service delivery scale (SDS)
 - capturing higher costs of delivering comparable services, due to increasing remoteness and isolation
 - socio-economic status (SES)
 - capturing differential use (and cost) of services by areas of differing SES
 - interstate differences in non-wage costs.

ASSESSMENT APPROACH

Regional costs and service delivery scale

- 3 The conceptual case for, and capacity to measure the effect of, regional costs and SDS on different services is discussed below.
- **Schools:** Regional costs and SDS are derived from the economic model of State funding of government schools. The schooling resource standard provided by the Department of Education, which drives the assessment of the Commonwealth funding of government schools, incorporates regional costs and SDS, but these effects are not separately identified.
 - **Post-secondary education:** State data on loadings for regional influences gives a direct measure of both regional costs and SDS.
 - **Health:** Independent Hospital Pricing Authority (IHPA) data on hospital costs include an adjustment in recognition that, for a comparable patient diagnosis and treatment, services in remote areas tend to be more expensive. In addition to this, funding for block funded hospitals can be used to capture the SDS effect in hospitals. IHPA data on regional cost effects for admitted patients and emergency departments are used as a proxy indicator for non-admitted patients and community and other health respectively.
 - **Housing:** States have indicated that it should be possible to capture the costs of public housing by region, but that subsidies for community housing may not be as reliably captured.
 - **Welfare:** The provision of some forms of welfare, such as child protection, is likely to experience a regional costs effect. However, as child welfare officers are likely to be somewhat centralised and cover a broad area, it is unlikely that States would have data that would enable costs to be reliably allocated to different regions. The Commission considers that there is no conceptual case for regional costs affecting NDIS or concessions. The general gradient is applied to child protection and general welfare expenses.
 - **Services to communities:** Subsidies paid for electricity are higher in more remote areas. There is some evidence for a gradient to apply to water subsidies, but only three States provided the required data. Queensland could not provide data but local government cost data confirmed a regional gradient. The Commission intends to derive a gradient from the limited State data but apply a 50% discount. Other Services to communities components are also likely to be more expensive in more remote locations, but data are not available to quantify the effect. Therefore, a general gradient will apply to these components.
 - **Justice:** The police assessment incorporates the influence of regional costs and SDS. However, unlike the 2015 approach, these influences cannot be separately identified, and so cannot be used as part of the general regional costs gradient. In addition, increasing costs for policing in increasingly remote areas also

capture the additional tasks undertaken by police in these areas, compared to less remote areas. State data on costs of courts and prisons have been used to inform a measure of regional effects in those components.

- **Roads:** The sourcing of road construction and maintenance quarry materials is unlikely to have any relationship to remoteness. However, distances are generally greater for the transport of plant, equipment and materials in more remote areas. A regional cost gradient cannot be readily measured, but the conceptual case for one is valid. As such, the Commission has retained the application of a general gradient to rural road length.
- **Services to industry:** The provision of business development is primarily through grants, which are not affected by remoteness. Regional cost differences are likely to have some influence on the cost of regulation.
- **Other expenses:** Some other expenses, such as central agency functions and public debt transactions, are largely unaffected by regional costs. For other services, such as fire protection services and cultural and recreational services, regional costs influence expenses. In total, the Commission is assessing regional costs in 50% of the other services component. Regional costs are not applied to natural disaster relief, administrative scale or the other components of this category.

4 In the 2020 Review, regional costs and SDS will be separately identified and measured in the following expense categories (components):

- Schools
- Post-secondary education
- Health (admitted patients and emergency department)
- Housing
- Justice (courts and prisons)
- Services to communities (electricity subsidies and water subsidies – regional costs only which may include some SDS costs).

5 Where known, the regional costs and SDS gradients for these categories are shown in Table 1. Data from States on housing costs by remoteness region are expected to be available later in 2019.

Table 1 Regional cost and SDS cost gradients

	Major cities	Inner regional	Outer regional	Remote	Very remote
Schools					
Regional costs	1.00	1.00	1.13	1.55	1.55
SDS	1.05	1.09	1.11	1.14	1.22
Combined effects	1.05	1.09	1.24	1.70	1.78
Post-secondary education					
Combined effects	1.00	1.10	1.16	1.62	1.87
Admitted Patients (by location of hospital)					
Regional costs	1.00	1.00	1.00	1.08	1.12
SDS	1.00	1.03	1.07	1.09	1.73
Combined effects	1.00	1.03	1.07	1.18	1.94
Emergency departments (by residence of patient) (a)					
Regional costs	1.00	1.00	1.00	1.22	1.22
SDS	1.00	1.03	1.11	1.15	1.47
Combined effects	1.00	1.03	1.11	1.40	1.79
Prisons (Prison location basis)					
Regional costs	1.00	1.00	1.00	1.07	1.07
SDS	1.00	1.00	1.00	1.02	1.02
Combined effects	1.00	1.00	1.00	1.09	1.09
Courts					
Combined effects	1.00	1.00	1.00	1.10	1.10
Housing					
Regional costs	NYA	NYA	NYA	NYA	NYA
Electricity subsidies					
Regional costs	-	-	-	1.00	3.45
Water subsidies					
Regional costs	-	1.00	1.26	2.62	2.62
Construction costs (b)					
Regional costs	1.00	1.04	1.09	1.32	1.54

Note: Regional costs and SDS are combined additively in schools, and multiplicatively in other assessments.

NYA is Not Yet Available.

Data are the latest available. In most cases this is 2017-18.

(a) Emergency department regional costs are calculated on a later year than SDS. In the 2021 Update, the Commission will have data for this service on a consistent basis.

(b) This represents the national average construction cost gradient. The assessment of investment costs uses a placeholder measure which includes a State specific version of this gradient, and is blended 50%-50% with the general regional cost gradient and the interstate wages disability. The appropriate measure has not yet been determined. See Attachment 21 — Investment.

Source: Commission calculation.

6 Where regional costs cannot be directly measured, it has been extrapolated using the average of the admitted patient and school regional cost gradients (referred to as the

general gradient). The assessment approach to regional costs and SDS for each expense category is shown in Table 2.

Table 2 Measure of regional costs and SDS by component

Component	Measure	Component	Measure
Schools		Justice	
State funded government schools	RC & SDS	Police	Implicit
Commonwealth funded government schools	—	Criminal Courts	RC & SDS
State funded non-government schools	RC & SDS	Other legal services	RC & SDS
Post-secondary education	RC	Corrective services	RC & SDS *
Health		Roads	
Admitted patients	RC & SDS	Rural roads	General
Emergency departments	RC & SDS	Urban roads	—
Non-admitted patients	Extrapolate	Bridges and tunnels	—
Community and other health	Extrapolate	Transport	
Non-hospital patients transport	—	Urban transport	—
Housing		Non-urban transport	—
First home owner expenses	—	Services to industry	
Social housing	RC	Agriculture regulation	General
Social housing user charges	—	Mining regulation	General
Welfare		Other industries regulation	General
Child protection and family services	General	Business development	—
NDIS	—	Other expenses	
Non-NDIS Disability services and aged care	—	Service expenses (a)	General
Concessions	—	Natural disaster relief	—
Other welfare	—	Administrative scale	—
Services to communities		Native title and land rights	—
Water subsidies	RC (a)	National capital	—
Electricity subsidies	RC	Location adjustment	—
Indigenous community development	General	Investment	RC (b)
Other community development and amenities	General		
Environmental protection	General		

Note: — means no regional cost assessment is made, on conceptual grounds.

RC & SDS refer respectively to the direct measurement of Regional costs and SDS using data specific to that service.

General refers to the extrapolation of a general Regional costs gradient, as measured in the admitted patient assessment.

Extrapolate refers to the extrapolation of a specific Regional costs and SDS gradient, as measured in relevant components of the health assessment.

Implicit refers to an integrated Socio-demographic measure of costs which incorporates regional costs and SDS disabilities, but these cannot be separately identified.

* represents an adjustment for place of service receipt being different to place of residence.

(a) Discounted by 50%.

(b) How construction costs in the Investment assessment are assessed has not yet been settled. A combination of Rawlinson's relative construction costs, regional cost gradients and wage costs were used in the 2015 Review assessment. See Attachment 21 – Investment.

Source: Commission decision.

Socio-economic status

- 7 In most expense categories, SES is measured as part of the socio-demographic composition (SDC) disability. This uses the population living in high SES through to low SES areas. The SES of an area is measured using the same principles the ABS employs to develop the Socio-Economic Indexes for Areas (SEIFA), but is calculated for:
- the Indigenous population using the Indigenous Relative Socio-economic Outcomes index (IRSEO)
 - the non-Indigenous population using the Non-Indigenous Socio-Economic Index for Areas (NISEIFA).

Interstate non-wage costs

- 8 The Commission is not intending to make an adjustment for interstate non-wage costs.¹

ASSESSMENT ISSUES

- 9 The 2015 Review assessments provided the starting point for the 2020 Methodology Review. In April 2018, Commission staff released a draft assessment paper setting out staff proposals on how geography affects the Commission's assessments. States provided submissions on the proposals. The staff proposals and State submissions are available on the [Commission's website](https://cgc.gov.au/), (<https://cgc.gov.au/>).
- 10 The main assessment issues affecting how geography is used in assessments were:
- use of ABS remoteness areas to classify remoteness
 - place of residence and place of service receipt
 - measuring SDS
 - measuring regional costs
 - interstate non-wage costs.
- 11 In general, States with a greater proportion of more remote areas argued, and presented evidence during the Commission's State visits, that it should make greater allowance for higher service delivery costs in these regions. Less remote States, in particular Victoria, argued that these costs could be overstated if allowance was not made for differences between place of residence and place of service delivery, and that there was not commonality of higher regional costs across service types.

¹ Referred to as the location adjustment in the 2015 Review.

12 The following sections discuss the main issues for category, including State views.²

Use of ABS remoteness areas to classify remoteness

13 The Commission uses remoteness as a key aspect of the expense category assessments, affecting both the use of services, and the cost of delivering services. It is important to choose an indicator of remoteness that appropriately captures the underlying concept, groups like areas together and distinguishes unlike areas.

14 In the 2015 Review, the Commission changed its measure of remoteness from the State Accessibility and Remoteness Index of Australia (SARIA) to ABS remoteness areas, which are based on the Accessibility and Remoteness Index of Australia (ARIA+).³ In this review, the Commission again considers ABS remoteness areas the best measure of remoteness for its purposes.

State views

15 Western Australia expressed concern that ‘very remote areas as defined by ARIA are all assumed to be equally costly to service’. During the State visit, Western Australia raised the prospect of using ARIA++, instead of ARIA+ or ABS remoteness areas. In its submission Western Australia said:

For regional costs, the CGC should recognise that ARIA-type measures are ultimately a mathematical construct, and need to be tailored to fit underlying cost drivers. The CGC could consider reforms to the current ARIA+ measure to better reflect underlying cost drivers at a global level, such as a continuous ARIA score, removal of distance limits, introduction of a sixth region, or indicators of different circumstances within ARIA-comparable regions to capture State-specific circumstances.

16 Queensland, Western Australia and the Northern Territory considered that ABS remoteness areas do not accurately group communities in like situations together, and do not accurately distinguish between communities with different circumstances.

17 The Northern Territory argued that population density could be a means by which very remote areas could be disaggregated further.

Analysis

18 The underlying issue for Queensland, Western Australia and the Northern Territory appears to be that very remote areas are not homogenous. These States appear to be advocating for differentiating very remote from extremely remote areas. The

² State submissions often include significant detail and supporting evidence. In this attachment, the Commission responds to the arguments and evidence States presented in their submissions. For the full detail of State submissions, see the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

³ The ABS measures access to services using ARIA+, which is produced by the Hugo Centre for Migration and Population Research at the University of Adelaide.

Commission accepts that very remote Australia is not homogeneous. The difficulty is in finding a way of splitting it that would group like areas in different States together in a material and reliable way.

- 19 Western Australia also suggested that the Commission identify indicators of State specific remote issues. It is not clear what this would entail.
- 20 **ARIA+**. Western Australia is concerned about the distance limits in ARIA+. ARIA+ is constructed so that greater distance from a major city increases remoteness. However, after 1 266 km, no further increase in remoteness is allowed for. The Commission acknowledges that this is a simplification of the real world relationship between distance and cost. However, the Commission also supports the contention by the developers of ARIA+ that there are diminishing effects of distance. The difference in remoteness between a major city and a location 500 km from a major city is much more profound than the difference between two locations 2 000 km and 2 500 km from a major city. In the absence of an immensely complex model allowing for diminishing effects of distance, the Commission is willing to rely upon the expertise of the Hugo Centre for Migration and Population Research and to consider that ARIA+ is a better reflection of remoteness than ARIA+ without distance limits.
- 21 A continuous ARIA+ score would not reflect how the Commission builds assessments. Rather than grouping like areas, it would produce a measure where each location in the country is unique. This would preclude the Commission from building an assessment based on observations of what States do in a policy neutral way, and replace this with either an actual per capita assessment of spending in each location, or a Commission judgment-based assessment.
- 22 Very remote areas cover 74% of the land area of the country but contain less than 1% of the country's population (and a slightly greater proportion of State spending). The Commission acknowledges that this area is not homogenous. However, it is difficult to obtain reliable data that would enable disaggregation of this population. It is also worth noting how the Commission's assessments are designed. The 'what States do' principle means that what States spend in very remote areas is allocated to the States with very remote populations. Splitting very remote into very remote and extremely remote does not change the assessed spending in non-remote areas; it merely redistributes needs within the current very remote areas. The creation of an extremely remote category would merely redistribute the money spent in these areas between States with very remote populations, from States with large very remote populations to States with large extremely remote populations.
- 23 **ARIA++**. The basic premise of the general approach of the suite of ARIA measures is that a score is generated based on the distance people need to travel to receive different types of services. Being a long way from a major city reduces the access to services typically sourced in major cities, and increases the costs of obtaining those

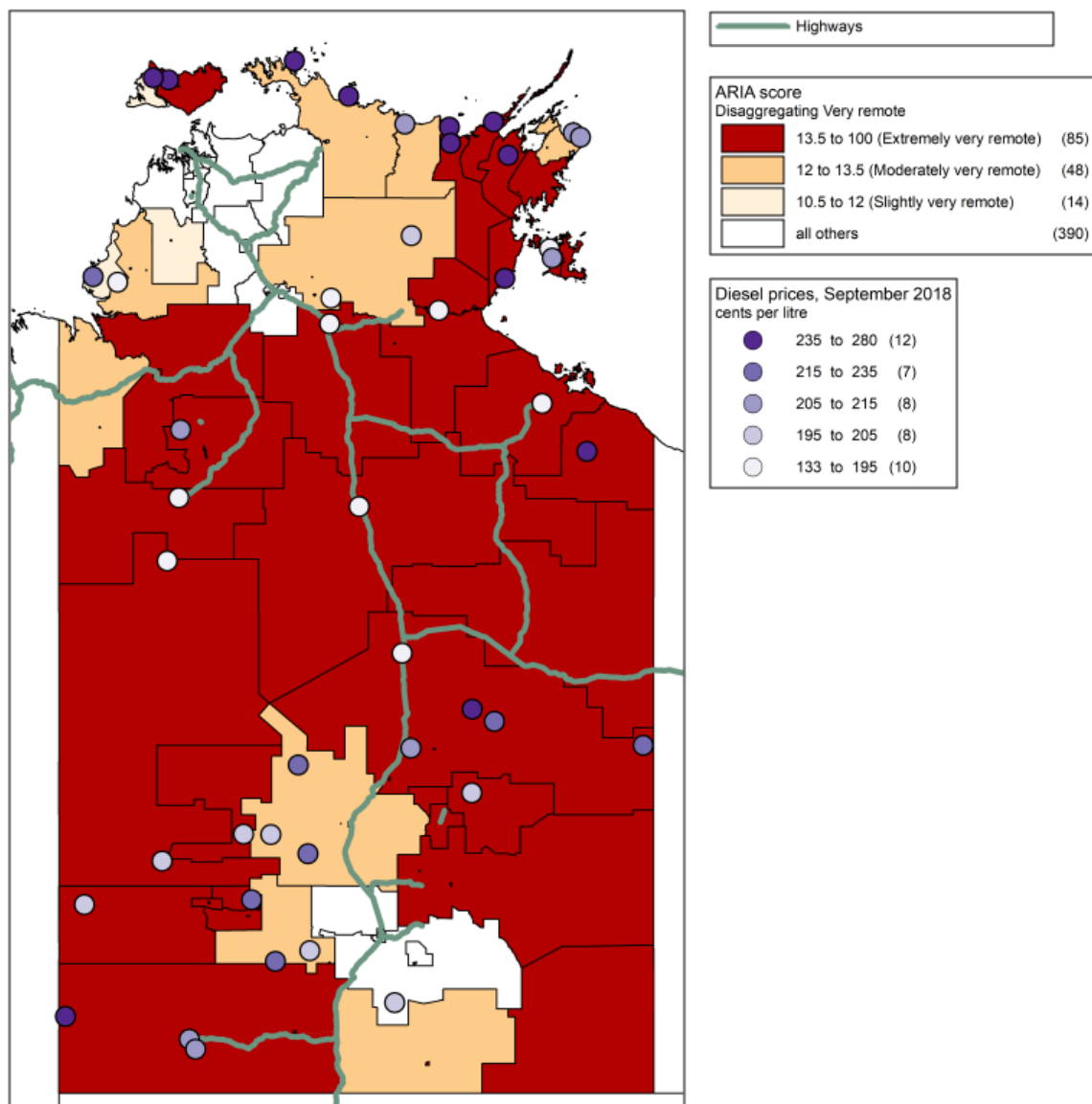
services. A similar phenomenon exists for services that are typically in towns of other sizes. Being a long way from a town of 1 000 people also increases the costs of obtaining services compared with being close to such a town.

- 24 The difference between ARIA+ (upon which ABS remoteness areas, and therefore Commission assessments, are based) and ARIA++ is that ARIA++ considers that distance from a town of 200 to 1 000 is a significant driver of cost in addition to the towns considered by ARIA+.⁴
- 25 The fundamental question is whether there are significant differences in costs between two schools, police stations or health centres that are similar distances from larger towns and cities, but one is in a town of 200-1,000, and the other is not. The Commission considers that very few inputs, other than labour, would be sourced from such a town, and that the presence of such a settlement would have no significant bearing on cost. Even if there were differences, it seems unlikely that the data would reliably and conclusively measure this, or that the difference would be sufficient to make a material adjustment and justify the additional complexity.
- 26 **Density.** The Northern Territory asked the Commission to consider a density based measure of isolation. However, there is no generally accepted measure of density as a proxy for remoteness, with the density of an area being highly sensitive to the arbitrary boundaries defining the regions. Maningrida and Wadeye, each with over 2 500 people in very remote Northern Territory, have a higher density than 80 000 people who live in the northern Blue Mountains, on Sydney's outskirts.
- 27 **Fuel costs.** The Northern Territory contended that the cost of providing services varies considerably within very remote areas, citing as evidence that diesel prices in some very remote locations are much higher than in other very remote locations. Figure 1 shows diesel prices in all very remote UCLs in the Northern Territory. This shows that there is significant variation in diesel prices across the Territory. While prices along highways sometimes are lower than those away from highways, there is no other immediately apparent systematic relationship. The variation does not appear to relate to:
- the density of the area (the Northern Territory suggestion for improving classification of remoteness)
 - the presence of towns of 200-1 000 (the Western Australian suggestion of using ARIA++)
 - ARIA + scores (which could also be used to disaggregate very remote areas).

⁴ ARIA+ considers the distance from each locality to the nearest towns, by road, with populations above 250 000, 48 000, 18 000, 5 000 and 1 000.

- 28 Developing a new classification of remoteness is beyond the resources of the Commission, especially in time for a 2020 Review. If States consider such a classification worthwhile, they would need to:
- find a conceptual model for classifying remoteness
 - generate a score for all areas
 - provide evidence that such a classification accurately distinguishes between areas of relatively high and low service use and/or cost (a relationship with the price of diesel, for example, would not be sufficient evidence).
- 29 An assessment would also need to be material.

Figure 1 Diesel prices and disaggregating very remote Northern Territory



Source: [PetrolSpy Australia](https://petrolspy.com.au/), (https://petrolspy.com.au/), [accessed 06/2019], and Hugo Centre for Migration and Population Research.

30 **Grouping remote areas together.** The Commission sometimes aggregates rather than divides remote areas, for example grouping remote and very remote areas together. The Northern Territory and Western Australia have expressed concern with this practice. As the Northern Territory has 25% of Australia’s very remote population, and only 16% of its remote population, grouping these regions will underestimate the Territory’s needs in situations where very remote spending per capita is higher than remote spending per capita. The reason the Commission groups these areas is because there are not always data that indicate whether, and by how much, very remote area costs exceed remote areas costs. The practice is often done where data analysis suggests that remote areas are actually more expensive than very remote areas, but in the absence of a conceptual case for such a pattern, the Commission applies a more reliable, but less detailed disaggregation.

Place of residence and place of service receipt

31 In some assessments, the Commission measures the cost of providing services in different regions, and applies the resultant cost differentials to the State user populations in those regions. Victoria argued that this approach ignores that people travel from their residences to more centralised locations to receive certain services; rather it makes the implicit assumption that people use services in the area in which they live. Victoria provided data showing the majority of people from remote areas appearing before a court do so in a major city (Table 3).

Table 3 Remoteness of residence by court remoteness, lower court defendants, Victoria, 2014-15

Defendant's residence	Court hearing				Total
	Major cities	Inner regional	Outer regional	Remote	
	%	%	%	%	%
Major cities	95.8	3.6	0.6	0.0	100.0
Inner regional	48.2	47.7	4.0	0.0	100.0
Outer regional	16.2	36.1	46.6	1.2	100.0
Remote	66.5	15.1	17.4	1.1	100.0

Source: Victorian Treasury.

Analysis

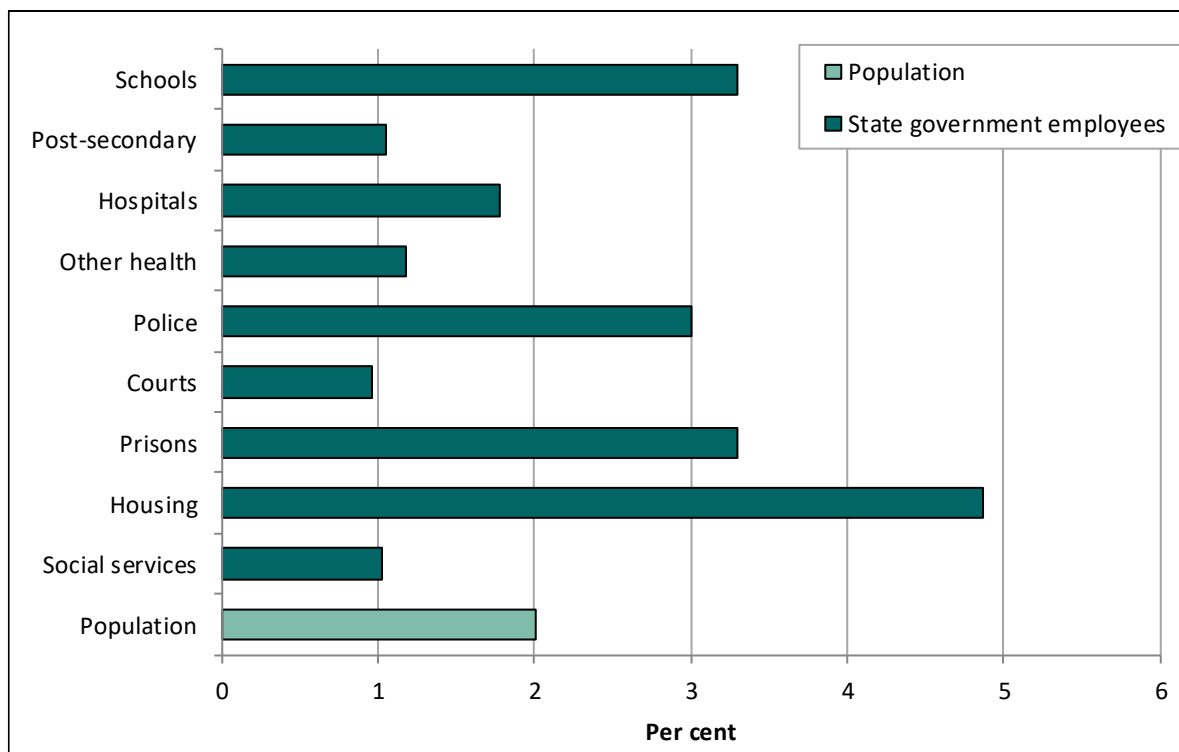
32 If a service is more expensive when provided in remote areas, that cost should be applied to the population that receives that service in remote areas, which is not necessarily the same as the population that live in remote areas. However, with some

exceptions, there is no identified policy neutral measure (or generally any measure) of the population by where it receives a service.⁵

- 33 No data are available on the distribution of service delivery for most services. However, Figure 2 shows the proportion of State government employees in selected service sectors working in remote areas. Schools and police are very decentralised services, with SDS or greater need leading to a proportion of staff working in remote areas higher than the share of the population in remote areas.
- 34 Post-secondary education, other health and courts appear to have similar levels of centralisation, with around 1% of employees working in remote areas.
- 35 About 1.8% of hospital staff work in remote areas, about the same proportion of the population. This appears to reflect two countervailing forces. Remote hospitals experience diseconomies through SDS, and so have higher staffing levels, while a range of services are centralised, with the hospitals in larger centres providing a wider range of services.

⁵ Data on the receipt of VET training hours indicate about 18% of remote residents receiving VET commute to non-remote areas for their training. In health, a similar proportion (20%) is evident for emergency department National Weighted Activity Units (NWAUs). However, people travel much further for admitted patient services, with only 50% of remote patient NWAUs being undertaken in remote hospitals (partly explained by the more complex conditions and procedures required to be undertaken in larger hospitals). While 50% of remote patient NWAUs (cost weighted patients) are in remote hospitals, 70% of patients are.

Figure 2 Proportion of State government employees working in remote areas, 2016



Source: 2016 Census of Population and Housing.

- 36 The schools assessment is unaffected by this issue, as the student population is classified by remoteness of where they attend school, not where they live (although in practice the difference is generally small).
- 37 In most other services where regional costs and SDS are measured directly, costs are effectively collected based on the residence of user populations for hospitals, social housing, electricity subsidies and police. The difference between place of service delivery and place of residence of user population is relevant for:
- Post-secondary education
 - Criminal courts
 - Corrective services
- 38 **Post-secondary education.** It is possible to measure the extent of the difference between place of residence and place of service receipt for Post-secondary education. People living in remote and very remote areas receive nearly 8 million hours of vocational education and training, but only 6.5 million hours are provided in remote and very remote areas. Nationally, the number of hours provided in remote areas is 82% of the number received by remote residents. This ratio varies significantly, as shown in Table 4.

Table 4 Remote provision and receipt of Vocational education and training, 2017

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	'000 hrs	'000 hrs	'000 hrs	'000 hrs	'000 hrs	'000 hrs	'000 hrs	'000 hrs	'000 hrs
Received by remote residents	638	20	1 801	2 613	745	99	0	1 978	7 894
Provided in remote areas	136	2	1 322	2 584	524	14	0	1 920	6 503
	%	%	%	%	%	%	%	%	%
Ratio	21	11	73	99	70	14	—	97	82

Source: National Centre for Vocational Education Research (NCVER).

- 39 This difference could reflect that some remote areas are serviced by non-remote towns to varying degrees in different States, or that the remote populations of Western Australia are not as near to non-remote towns, or that, particularly for Indigenous populations, take up of services is contingent on them being provided close to home. Alternatively, it could reflect differences in policy choice about where to provide vocational education and training.
- 40 If the State populations were adjusted to reflect these actual service delivery proportions, there would be two counteracting effects. The proportion of people (and hence costs) assessed to warrant the higher remote cost weight would be reduced, but the proportion of those costs attributed to Western Australia and the Northern Territory would be increased. An adjustment would have a very small effect (around \$1 per capita) on the assessed fiscal capacities, and so has not been made.
- 41 **Prisons.** While States have a high degree of policy control over where to place prisons, they appear to have an average policy of distributing prisons across regions. States with large remote populations tend to have more remote prisons. However, the extent of providing remote prisons for prisoners from remote areas is much less significant than in other services. State provided data have been used by the Commission to inform its judgement on the appropriate regional cost weights to apply to the prison component. This assessment is described in Attachment 16 — Justice.
- 42 **Courts.** Data on the extent to which people travel from more remote locations to more accessible towns to attend court, along with State provided data on the costs of providing court services, has informed the Commission’s judgement on the appropriate regional cost weights to apply to courts. This assessment is described in Attachment 16 — Justice.

Measuring Service Delivery Scale

- 43 When States deliver services in smaller communities, the indivisibility of labour and other related effects increase costs. In the 2015 Review, the Commission captured this through the SDS assessment, which used a geographic classification of SDS areas, defined as locations more than 50 km by road from a town of 5 000 or more. In this

Review, the Commission is assessing SDS using ABS remoteness areas, the same geography used for the regional costs assessment.

State views

- 44 Victoria was concerned that there is a level of double counting between the SDS and the regional costs assessments. It considered that the approach to measuring where SDS is experienced in the 2015 Review was flawed, but did not consider that redeveloping the assessment was warranted, or likely to result in materially different outcomes. It argued that the proposed approach to measuring SDS in Schools was flawed, and that school size having an effect on school funding per student is a reflection of scale effects, rather than a fixed cost per school.
- 45 The ACT accepted the conceptual case that SDS and regional costs are different ideas, and could be measured separately. However, the States that gain from SDS tend to be the States that gain from regional costs. Using a similar approach to both, based upon level of remoteness, would simplify the assessments.
- 46 The Northern Territory was concerned that SDS exists in much wider range of areas than indicated by the 2015 Review approach. For example, block funded hospitals are funded as such because they do not have sufficient throughput to be economically feasible. This is the very basis of a SDS disability. The Northern Territory also considers that remote large towns such as Katherine and Alice Springs bear additional SDS costs, associated with providing outreach services to the surrounding communities.

Analysis

- 47 The Commission considers that the 2015 Review approach to defining SDS areas (being those areas more than 50 km from a town of 5 000 people) was an appropriate, although not an optimised, definition. However, the Commission is attracted to the ACT argument that SDS can be reliably and more simply measured using remoteness areas.
- 48 For the 2020 Review, in an attempt to simplify the assessment and reduce the reliance on judgement, the Commission has changed the police assessment. Both remoteness and SDS effects are captured in the same calculation and use the same geography. This geography is necessarily relatively broad, as States cannot reliably or meaningfully allocate costs to individual police stations. So conceptually, SDS disabilities are still captured in the police assessment, but as part of an integrated category assessment which captures not only regional costs and SDS, but also differences in the nature of the police task in different regions. This assessment is described in Attachment 16 — Justice.

- 49 IHPA has provided data on the cost weighted use of hospitals by patient remoteness, for hospitals funded using activity based funding (ABF) and block funded hospitals. These data allow the Commission to capture SDS affects for hospitals using patient remoteness. This assessment is described in Attachment 12 — Health.
- 50 As the Commission is assessing SDS using remoteness areas for both police and hospitals, it considered whether this was appropriate in Schools as well, so that there would no longer be a need to maintain a specialist SDS geography. Instead of calculating the average school size in SDS and non-SDS areas, as was done in the 2015 Review, the Commission is calculating the average school size in each remoteness region, as described in Attachment 10 — Schools.
- 51 Conceptually SDS relates to the indivisibility of labour and the fixed costs of providing services in a certain location. This is related to the population in small isolated communities. Regional costs relate to the additional costs required to run a service in more remote locations, due to influences such as higher staff costs, greater distances travelled, and staff housing requirements. These are two distinct disabilities, but there is significant (although not perfect) overlap in the regions in which they occur, and the States which experience them most significantly. While they are correlated in geography, they are separate concepts, and the approaches used to measure them (either separately or combined) do not result in double counting of either effect.

Measuring regional costs

- 52 In the 2015 Review, the Commission measured the effect of regional costs on government schools and police services. It generalised from these relationships to other services where data were not available. The Commission acknowledged that different services can be delivered in very different, less localised, ways, and so discounted the regional cost gradient where it was extrapolated to other services.
- 53 In the 2020 Review, the Commission has used category specific data on the effect of increasing remoteness on a broader range of services than in the 2015 Review, and so has improved the quality of the evidence base for this assessment.

State views

- 54 New South Wales and Victoria were concerned about extrapolation from one service to another. The view of these States is that the nature of service delivery is so different it is unreasonable to expect that the effect of increasing remoteness on, say, schools has any relationship to the effect on welfare or other services. Victoria contends that in the absence of a reliable evidence, the Commission should not assess regional costs. New South Wales contends that a significant discount is warranted where extrapolation is necessary.

55 Queensland considered it important to develop reliable assessments for the regional cost gradient in each service.

Analysis

56 Table 2 shows that for most components in most expense categories, the impact of regional costs and SDS either:

- does not have a strong conceptual basis, or
- can be measured using data specific to the delivery of that service.

57 There are a small number of other areas where data cannot be gathered on the effect, but there is a strong conceptual case that more remote areas, and smaller communities, face higher costs.

58 In some of these, there are similar services where data can be reliably measured, and so the Commission has extrapolated:

- Regional costs from emergency department services to non-admitted patients.
- Regional costs and SDS from admitted patient services to community and other health services.

59 For other services, a general gradient is required.

60 Table 1 shows that different services can have quite different slopes to their regional gradient. This reflects that different services are delivered and measured in different ways:

- whether services are delivered locally or regionally,
- whether services are measured on the place of service delivery or place of residence (see discussion of this issue from paragraph 31).

61 Where a regional cost gradient cannot be directly measured, but a strong conceptual case exists, the Commission considers the average regional cost gradient of schools and admitted patient services should be used. This incorporates regional costs but not SDS. This general gradient is applied in:

- child protection and family services
- services to communities, other than water and electricity subsidies
- rural roads
- services to industry (regulation components)
- other expenses.

62 For Investment, cost indices from the Rawlinsons Construction Handbook provide some indication of the costs of construction. However for some major State specific construction activities, such as roads, Rawlinsons is less reflective of costs. In the 2015 Review, the Commission blended (50:50) a measure based solely on Rawlinsons, and a measure based on the relevant regional cost gradient and Interstate wage

costs. In the 2020 Review, the Commission is still considering how best to measure differences in the cost of investment, using the available data on recurrent regional and wage cost measures and the construction cost factors derived from Rawlinsons.

Interstate non-wage costs

- 63 In the 2015 Review, the Commission decided that there were differences between the costs of providing services in different capital cities. For example, Western Australia and the Northern Territory typically have higher costs associated with attending interstate meetings than New South Wales or Victoria.
- 64 The regional costs assessment does not assume that all capital cities are equal. While most capital cities are classified as major cities, Hobart is classified as inner regional and Darwin is classified as outer regional.
- 65 The Commission decided that Hobart and Darwin are, in some regards, as isolated as other comparable inner and outer regional centres, but in other regards are more comparable with capital cities.
- 66 Perth is more isolated than the larger capital cities of Sydney, Brisbane and Melbourne, but it is still a large city and much more like the large capital cities in terms of its access to production, manufacturing and trade. Canberra is a much smaller city and not like other major cities in terms of production, manufacturing or trade.
- 67 On the basis of these concerns, the Commission made a judgement based adjustment in the 2015 Review that reduced the fiscal needs of Darwin and Hobart, and increased the fiscal needs of Canberra and Perth.
- 68 The Commission still considers that there are differences between States in their interstate non-wages costs. However, the lack of data, and the difficulty in determining the magnitude, or even in some cases the direction, of an appropriate adjustment has led the Commission to cease this assessment.

State views

- 69 New South Wales and Victoria considered that this assessment was based on a weak conceptual case, and no evidence, and as such should be discontinued.
- 70 Tasmania was also concerned by the lack of evidence, but could not identify an alternative evidence based approach.
- 71 The Northern Territory considered that Darwin is not like major cities, and as such the adjustment made by the Commission to reduce its relative need was not warranted. It was also concerned that the size of the adjustment appeared excessive.

Analysis

72 Table 5 shows the assessed costs made in the 2019 Update.

Table 5 Assessed interstate non-wage costs in Update 2019, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
\$ million	-9	-7	-5	91	-2	-41	40	-67
\$ per capita	-1	-1	-1	35	-1	-77	95	-271

Note: This assessment is based on a zero standard, with the assessed costs summing to zero. Therefore this table represents both the assessed costs and the difference from EPC.

- 73 Tasmania and the Northern Territory have negative needs in this assessment. This reflects that while they are, in many ways, inner and outer regional centres, in other ways they have the attributes of capital cities. However, it is worth noting that they are also much more isolated than Sydney, Melbourne and Brisbane. So while their status as capital cities does reduce their expenditure needs compared to their status as regional towns, their isolation increases their expenditure needs. The net effect of these two forces is difficult to determine.
- 74 While Canberra is a much smaller centre than other major cities, and so it was deemed to have higher costs associated with this, it also has easier access to Sydney, Melbourne and Brisbane than Perth, Hobart or Darwin.
- 75 The Commission concludes that the direction of any adjustment for States other than Western Australia is not self-evident. The Commission acknowledges that interstate non-wage costs are likely to increase Western Australia's costs in a way that is not assessed in other categories. However it is not clear that such an adjustment would be material. In the 2019 Update, the adjustment made for Western Australia was only marginally material. The Commission has decided to cease the assessment of interstate non-wage costs on the grounds that it is unreliable.

OTHER ISSUES CONSIDERED BY THE COMMISSION

- 76 There were a number of other issues considered by the Commission, largely in response to concerns raised by States. These issues related to the method for measuring existing disabilities or requests for new disabilities that were not included in the 2015 Review assessment. The main reasons for not assessing certain disabilities identified by States are:
- the conceptual case for a disability has not been established

- an assessment would not be material, that is, redistribute more than \$35 per capita for any State⁶
- data are not available to make a reliable assessment.

Housing costs and disadvantage

77 Measures of socio-economic disadvantage take account of gross income, but do not take account of the variation in housing, or other costs, and hence they treat people with the same income as comparable, rather than people with the same capacity to purchase goods and services.

State views

- 78 Victoria was concerned that high housing costs in Melbourne compared with most other capital cities meant that it had a greater need for public housing than would be measured by the Commission's 2015 Review approach.
- 79 New South Wales considered that the high housing costs in Sydney meant that the population was generally of lower SES than would be measured using an indicator that did not take account of housing costs.
- 80 New South Wales commissioned the ABS to produce a version of SEIFA that included the variable of whether a household is in involuntary housing stress. Involuntary housing stress was defined as households that spend more than 30% of their income on rent or mortgage payments. It excluded households in the top 60% of household income, as these households were assumed to be paying high housing costs as a voluntary choice of residential location, or as a form of savings.

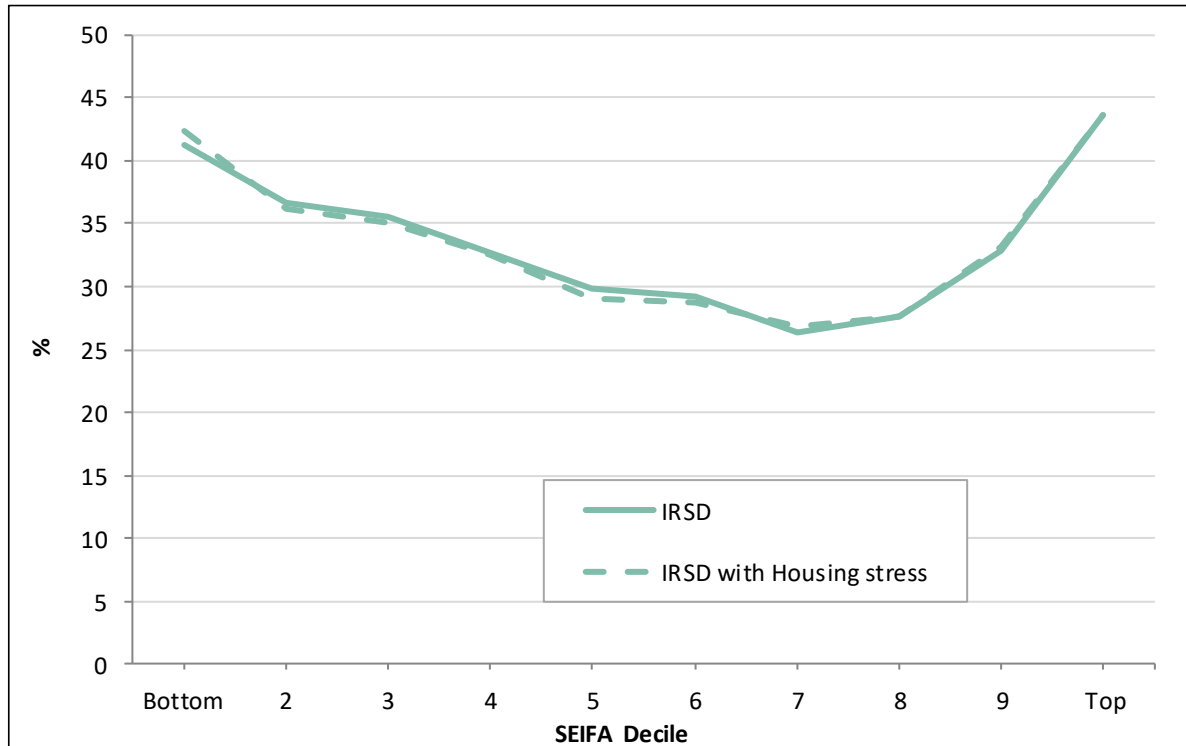
Analysis

81 The Commission agrees with the New South Wales argument that housing costs affect SES. It also accepts that incorporating housing stress into SEIFA, or NISEIFA, is an appropriate strategy for dealing with this issue. Analysis of the data provided by New South Wales shows that the primary effect of incorporating housing costs into a measure of SEIFA is to increase the number of people classified as low SES in all major cities, where housing costs tend to be higher, while decreasing the number of these people in regional and remote areas, where housing costs tend to be lower. Figure 3 shows that under a measure of SEIFA based upon the Index of Relative Socio-economic Disadvantage (IRSD), Sydney has 41% of the population in the bottom decile in major cities. Incorporating housing stress increases this share to 42%. Under

⁶ The Commission has set a materiality threshold for including a disability. A disability assessment must redistribute more than \$35 per capita away from an equal per capita assessment for any State to be included.

this change, Sydney's share of middle SES declines. The changes in other cities are generally smaller.

Figure 3 New South Wales' share of each major city decile population, 2016



Source: Commission analysis of New South Wales provided ABS consultancy.

- 82 This change is likely to result in a very small change to the GST distribution, well below the materiality threshold, and an adjustment is not warranted.
- 83 The ABS has not included housing stress in its measure of SEIFA, due to concerns about the effect of Commonwealth Rent Assistance on apparent housing costs, and concerns that spending 30% of household income on rent can be a very different socio-economic effect than spending 30% of household income on a mortgage, even for low income households. If the ABS resolves these issues and determines an appropriate and consistent way of incorporating housing stress into its measure of SEIFA, the Commission would expect to use the same indicators in NISEIFA.

Brownfields development

- 84 New South Wales and Victoria argued that much of their population growth is occurring within urban areas, as industrial land is converted to residential uses, and low density residential land is converted to higher density. They argue that the cost of retrofitting infrastructure in these areas is significantly more expensive than installing infrastructure in greenfields developments.

- 85 Based on the evidence provided during the State visits, the case for higher cost infrastructure in brownfields developments appears strongest for schools. Victoria stated that it constructs about 12 schools per year, and that 80% of those are greenfields schools and that an average greenfields primary school costs \$15 million while a comparable brownfields school would cost about \$60 million. On these numbers, Victoria spends \$108 million per year (\$16 per capita) on the additional brownfields costs that are not captured by the Commission's current assessment. It seems unlikely that such spending would produce a material assessment. However, it is worth considering whether these assumptions are conservative or exaggerated.
- 86 Large population growth in brownfields areas is likely to require new schools to be constructed. There is also likely to be infrastructure required for some other services, although not many. There are likely to be some services (for example utilities) which would require new infrastructure in greenfields areas, but existing infrastructure can be used in brownfields areas, offsetting the effect of a brownfields assessment.
- 87 There are likely to be high costs of brownfields development related to transport. Melbourne is currently building a new underground rail system. The proposed transport assessment recognises that cities with densely settled areas have higher costs.
- 88 Overall, the Commission considers that the conceptual case for a brownfields development assessment is strong. However, on the available evidence, an assessment of non-transport effects is unlikely to be material. Related, although different, disabilities relating to urban complexity are discussed in Attachment 18 — Transport.

Measures of Indigenous socio-economic disadvantage

- 89 In response to the 2015 Review terms of reference requiring it to 'develop methods to appropriately capture the changing characteristics of the Indigenous population', the Commission adopted the Indigenous Relative Socio-Economic Outcomes index (IRSEO) as the geographic socio-economic index for the Indigenous population.
- 90 In the 2015 Review and 2018 Update, some States raised concerns with technical aspects of IRSEO. Staff proposed to work with the Centre for Aboriginal Economic and Population Research (CAEPR) to develop a revised measure.
- 91 Queensland, the Northern Territory and the ACT consider that the broad level of geography used in IRSEO can result in a masking of the diversity of the level of disadvantage in different sub-areas.
- 92 While CAEPR had been intending to examine the level of geography used for IRSEO, the required funding has not been continued and CAEPR does not have the resources to undertake the planned further development of IRSEO. The Commission does not have the resources to progress this work on its own.

93 In any case, the Commission’s view is that while the choice of geography may have some effect, it is relatively minor.

REDISTRIBUTION FROM AN EPC ASSESSMENT

94 Table 6 shows the extent to which the regional costs, including SDS, assessment lead to a redistribution that differs from an equal per capital (EPC) assessment. States with a positive redistribution are assessed to have above average spending requirements and States with a negative redistribution are assessed to have below average spending requirements. In per capita terms, the largest redistributions affect the Northern Territory and Western Australia, with a larger share of their population in higher cost remote areas, and the ACT and Victoria, with a smaller share of their population in such areas.

Table 6 **Redistribution from an EPC assessment, regional costs, 2017-18**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Schools	-110	-111	50	64	22	12	-9	82	230
Post-secondary education (a)	..	..	..	..	..	..	..	..	..
Health (a)	..	..	..	..	..	..	..	..	..
Housing	-27	-47	23	34	5	2	-3	14	78
Welfare	-15	-38	13	22	7	1	-3	14	56
Services to communities	-28	-65	64	26	6	3	-14	10	107
Justice (a)	-3	-4	1	3	1	0	0	3	7
Roads	-10	-26	19	14	3	0	-2	2	39
Transport	-2	-2	1	1	0	0	0	2	5
Services to industry	-8	-7	3	7	1	1	-1	4	15
Other expenses	-30	-33	16	19	6	4	-3	22	66
Total (a)	-234	-334	190	189	51	21	-35	152	603
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Total (a)	-29	-52	38	73	30	41	-85	615	24

Note: The redistribution is the difference from an EPC assessment of category expenses.

(a) Excludes components where regional cost influences cannot be readily separated from socio-demographic composition influences.

Source: Commission calculation.

UPDATING THE ASSESSMENT

95 As required by the terms of reference, the Commission will incorporate the latest available data in the assessment during the annual updates. This will allow the assessment to reflect changes in State circumstances. The updating of category

specific regional cost calculations is discussed in the relevant category specific attachments.

- 96 The general gradient, calculated from Schools and admitted patients data, is updated annually.

OUTSTANDING ISSUES

- 97 The Commission is still seeking data on social housing regional expenses from States to finalise this assessment.

FURTHER CONSULTATION

- 98 Before the release of the final report by 28 February 2020, there will be opportunities for consultation on this assessment. For further information about this category, please contact Tim Carlton on Tim.Carlton@cgc.gov.au.

ATTACHMENT 26

OTHER DISABILITIES

Summary of proposed changes to the 2015 Review methodology

- National capital planning allowances have been revised.
- National capital allowances for wider roads, above average urban space, above average urban/bush interface and bus subsidies are no longer being assessed.
- The general method of estimating cross-border costs has been discontinued and a cross-border factor will not be applied to welfare expenses and recreation and culture expenses.
- The remaining cross-border assessments are considered in their relevant attachments.
- Land rights expenses are assessed for all States (not just the Northern Territory). They are assessed on an actual per capita basis.
- The native title and land rights expenses are assessed together as some States indicated they could not be reliably separated.

1 This attachment contains the Commission's draft proposals for the Other disabilities following consultation with the Commonwealth and States. Other disabilities include the following:

- national capital
- cross-border
- native title and land rights.

NATIONAL CAPITAL

- 2 National capital allowances recognise the unavoidable extra costs incurred by the ACT, because of Canberra’s status as the national capital or because of legacies inherited from the Commonwealth at self-government, that continue to affect its costs of service delivery.

ASSESSMENT STRUCTURE

- 3 The Commission intends to assess the following national capital allowances in the 2020 Review.

Table 1 National capital allowances, 2020 Review

Disability	Influence measured by disability
Planning	Recognises the additional costs due to the impact of the National Capital Plan on planning and development activities, the administrative costs of capital works and maintenance of the leasehold system.
Police	Recognises the additional costs to the ACT from using the Australian Federal Police to provide police services.

Source: Commission decision.

ASSESSMENT APPROACH

- 4 The assessment includes two types of national capital allowances:
- planning allowances, which recognise the higher costs to the ACT in relation to planning and development activities due to the operation of the National Capital Plan (NCP) and the costs associated with maintaining the leasehold system
 - a police allowance, which recognises that the ACT has no practical alternative but to use the Australian Federal Police (AFP) as the provider of its policing services and it has no control over the above average salaries paid to AFP employees.

Planning allowances

- 5 In its rejoinder submission, the ACT provided new evidence on the cost of planning allowances. The Commission intends to use those data as the basis for the planning allowances to be assessed in 2017-18. The allowances for other assessment years will be determined by indexing the 2017-18 amounts using the State and local government final consumption expenditure (SLGFCE) chain price index.
- 6 Table 2 shows the assessed planning allowances for 2017-18 in the 2020 Review.

Table 2 National capital allowances, planning allowances, 2020 Review

	2017-18
	\$m
Planning	
The impact of the National Capital Plan on planning and development activities	1.8
Costs incurred by the ACT in operating a leasehold system	2.5
The impact of the National Capital Plan on the ACT’s capital works program	2.2

Source: Commission calculations and the ACT Rejoinder Submission.

Police allowance

- 7 Table 3 shows that the police allowance is calculated by:
 - deriving a notional level of ACT police staffing by applying the national average per capita number of police staff (sworn and unsworn staff combined) to the ACT’s population
 - multiplying that notional staffing level by the difference between the average AFP and the average State police staff salaries (sworn and unsworn staff combined), discounted for the ACT’s wage costs factor to avoid double counting the higher underlying wage levels in the ACT.
- 8 The national average staffing level is adjusted because the ACT’s socio-demographic characteristics examined in the Justice assessment indicate that it needs less than the average police staff to population ratio. The ACT staffing level is calculated by adjusting the national average per capita level of police staff for the ACT’s justice services socio-demographic characteristics¹ and its population.
- 9 The staffing and salaries data are sourced from the Productivity Commission’s *Report on Government Services*, which is a reliable and comparable data source. The assessment is updated annually. However, due to the time lag in the production of the report, the Commission indexes the most recently calculated allowance using ABS’ national public sector wage price index.

¹ Due to changes in the Justice assessment the policing task acts as a proxy for socio-demographic characteristics.

Table 3 National capital allowance, police services

	Unit	2014-15	2015-16	2016-17	2017-18	
Calculate notional ACT staffing						
A.	Total staff	no.	69 282	70 652	72 680	72 680
B.	Total population	'000	23 637	23 981	24 385	24 770
C.	Average staff [C = A / B]	no.	0.003	0.003	0.003	0.003
D.	ACT population	'000	391	398	407	416
E.	Assessed staff [E = C * D]	no.	1 149	1 175	1 215	1 221
F.	ACT socio-demographic characteristics factor		0.761	0.762	0.763	0.764
G.	Adjusted assessed staff [G = E * F]	no.	874	895	927	933
Calculate difference in salaries						
H.	Average State salary (a)	\$	119 397	121 093	118 505	118 505
I.	ACT wage costs factor		1.020	1.035	1.045	1.054
J.	Adjusted State salary [J = H * I]	\$	121 823	125 320	123 839	124 864
K.	Average ACT salary (a)	\$	134 427	130 146	133 023	133 023
L.	Difference [L = K - J]	\$	12 604	4 826	9 184	8 159
M.	Wage price index adjustment		1.000	1.000	1.000	1.024
N.	Difference in salaries [N = L * M]	\$	12 604	4 826	9 184	8 351
Calculate police allowance						
O.	Assessed allowance [O = G * N]	\$m	11.0	4.3	8.5	7.8

(a) Excludes payroll tax because the AFP is exempt from paying payroll tax.

Source: Productivity Commission, *Report on Government Services*.

ABS, *Wage Price Index*, Cat. No. 6345.0, ABS Canberra, Table 4a.

ASSESSMENT ISSUES

10 The 2015 Review assessments provided the starting point for the 2020 Review. In April 2018, Commission staff released a draft assessment paper setting out staff proposals for the national capital assessment. States provided submissions on the proposals. The staff proposals and State submissions are available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

11 The main issues for the assessment were:

- planning allowances
- police services.

Planning allowances

12 In 1989, when the ACT was granted self-government, the Commonwealth established the National Capital Authority (NCA) to manage its continuing interest in the strategic planning and development of Canberra as the nation's capital. The NCA did so, in

part, through the development and management of the NCP. The NCP placed restrictions on planning and development decisions in the ACT and the Commission considered it led to higher costs for the ACT Government. The Commission also concluded similar additional costs were not incurred by other States.

- 13 As it has been some time since these allowances have been comprehensively reviewed, the Commission decided that the conceptual case for them would have to be re-established in the 2020 Review,² as the ACT's circumstances may have changed since those allowances were first introduced in the 1999 Review. The ACT Government has had the time to adapt its practices to reduce the financial impact of the NCA and NCP on the ACT's planning, land management and other matters inherited from the Commonwealth. Further, the NCA was undertaking a reform process to modernise the NCP, which could reduce the costs imposed on the ACT.
- 14 The Commission noted that other States incurred costs in their planning, land management and capital works activities from having to interact with other levels of government. They also faced circumstances outside their control, for example, having to deal with world heritage sites.³
- 15 The ACT said there was a strong case for continuing these planning allowances. It argued that the additional costs imposed on it were a structural feature of the dual planning system in place since self-government and showed little prospect of change. The constraints of the NCP continued to impose additional direct staffing costs on the ACT, chiefly regarding individual project elements to ensure they conform (in the view of the NCA) with the NCP. Additional staff resources were also required to obtain NCA approval for amendments to the Territory Plan.
- 16 The ACT said the NCP related costs were growing as the ACT grows – both in terms of its population and its economy. It sought an allowance of \$1.8 million for NCP related **planning and development activities**. Its claim was equivalent to an extra 10.3 full time equivalent staff over four agencies, plus some minor consultancy costs.
- 17 The ACT said its **capital works** program continued to face additional unavoidable costs directly linked to the NCP. It listed a number of projects and calculated an additional \$13 million per year associated with higher design specifications, time delays and additional administrative requirements. It said this was partly offset by improved amenity and design outcomes in the order of \$3 million per year, for a net cost to the ACT of \$10 million per year.
- 18 The ACT sought a new allowance for extra costs associated with its **light rail project**, due to the NCA imposed requirement for higher quality landscaping and fixtures.

² The ACT's planning allowances were last comprehensively considered in the 2004 Review.

³ World heritage sites are governed by Commonwealth legislation. The ACT is the only State without a world heritage site.

- 19 The ACT said it had 24 staff dedicated to the operation of its **leasehold system**, 20 of whom performed functions that did not exist in freehold systems other States. It said this translated to an additional cost of \$2.5 million per year.
- 20 The Commission considers the ACT has made the conceptual case for planning allowances associated with the NCP, but only those relating to planning and development activities, the administrative component of capital works projects and operation of the leasehold system. The Commission intends to continue to assess an allowance for the additional cost to the ACT's **planning and development activities** due to the NCP and use the updated estimate provided by the ACT as the allowance for the 2017-18 assessment year.
- 21 While the Commission considers there to be a case for the extra administrative costs of the dual planning system, the case is less clear for the costs associated with higher quality assets and materials required in capital works projects, particularly since these have some offsetting benefits to the ACT which are difficult to quantify. The Commission notes that, in relation to both the light rail project and other capital works, the majority of the additional costs cited by the ACT reflect acquisition of higher quality assets, rather than the administrative costs of interacting with the NCA. These higher asset costs, especially in the cost of transport, also appear to be informed by the choice of transport mode. This makes it difficult to determine the ACT's unavoidable capital costs.
- 22 The Commission intends to assess an allowance for the additional administrative costs imposed on the ACT in relation to **capital works**, but not for the ACT's other claims in relation to capital works and the **light rail project**.⁴ Based on the ACT's rejoinder submission, the Commission intends to assess an allowance of \$2.2 million for these additional administrative costs in 2017-18.⁵
- 23 The Commission first accepted the extra costs to the ACT due to its leasehold system in the 2004 Review. The ACT does not have the option to move to a freehold system. It is the only State to operate a leasehold system only. In its rejoinder submission, the ACT provided updated information on the staff required to manage those aspects of the leasehold system that have no equivalent in a freehold system. These activities included renewing leases, transferring leases, providing advice, making determinations on concessional leases and managing lease variations and their associated charges. The Commission intends to continue to assess an allowance for the extra costs imposed on the ACT due to the requirement to maintain a **leasehold system** using the updated data provided by the ACT.

⁴ The ACT's other claims related to the need for higher quality design and material specifications, time delays imposed on developments and additional operating costs for the light rail.

⁵ The ACT's rejoinder submission indicates that administrative costs represent about 15% of the \$13 million additional cost of capital works due to the NCP (about \$2 million), and about 3.4% of the additional costs of the light rail project due to the NCP (equivalent to about \$0.2 million per year).

- 24 The ACT raised a number of claims relating to **urban form**, additional services provided to the Commonwealth Government and roads. The Commission does not intend to assess allowances for these claims.
- 25 In relation to urban form, while the ACT's calculation shows that Canberra has an above average ratio of greenspace, it is comparable with Perth, Hobart and Darwin. In addition, the ACT has clear capacity to manage its level of open space, as evidenced by its urban infill policies. The Commission considers the ACT's claim with regard to services provided to the Commonwealth government relate to its level of funding via a multilateral memorandum of understanding (MoU), and hence is outside the scope of the national capital assessment.
- 26 The wider roads allowance has been discontinued. This is consistent with the Commission's decision when it first assessed this allowance, in its 2004 Review. It also decided the length of time the allowance would be retained.

Indexing

- 27 In the 2015 Review, national capital allowances were indexed by the State and local general government final consumption expenditure (SLGFCE) chain price index. SLGFCE is a national accounts aggregate that reflects the expenditure of States. The Commission considers that indexing using SLGFCE remains the most appropriate approach to updating the assessment.

Police allowance

Analysis

- 28 The Commission accepts the ACT has no practical alternative but to use the AFP as the provider of its policing services. This leads to higher costs because the AFP pays above average salaries to its employees.
- 29 The foundation of the constraints on the ACT's policing arrangements lies in:
- the *Australian Capital Territory (Self-Government) Act 1988* – section 23(1)(c), which says: '...the [ACT Legislative] Assembly has no power to make laws with respect to ... the provision by the Australian Federal Police of police services in relation to the Territory'
 - Section 28 of the same Act, which states that any law passed by the ACT Legislative Assembly will have no effect if it is inconsistent with '...a [Federal] law in force in the Territory...'
 - Section 8(1)(a) of the *Australian Federal Police Act 1979*, which states that a primary function of the AFP is '... the provision of police services in relation to the Australian Capital Territory.'

30 The Commission intends to retain the police allowance and assess it using the method shown in Table 3.

REDISTRIBUTION FROM AN EPC ASSESSMENT

31 Table 4 shows the extent to which the assessment for this disability differs from an equal per capita (EPC) assessment. States with a positive redistribution are assessed to have above average spending requirements and States with a negative redistribution are assessed to have below average spending requirements. In per capita terms, the ACT experiences the largest redistribution.

Table 4 **Redistribution from an EPC assessment, national capital allowance, 2017-18**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	-5	-4	-3	-1	-1	0	14	0	14
\$ per capita	-1	-1	-1	-1	-1	-1	33	-1	1

Note: The redistribution is the difference from an EPC assessment of expenses.

Source: Commission calculation.

UPDATING THE ASSESSMENT

32 As required by the terms of reference, the Commission will incorporate the latest available data in the assessment during the annual updates. This will allow the assessment to reflect changes in State circumstances.

- The following data will be updated annually:
 - The staffing and salaries data, sourced from the Productivity Commission’s *Report on Government Services*
 - State and local government final consumption expenditure index chain price data.

CROSS-BORDER

- 33 Cross-border costs are incurred when residents of one State use services provided by another. Cross-border flows can occur across any border (for example, the New South Wales-Queensland border in the region of Tweed Heads-Coolangatta, or the New South Wales-Victoria border around Albury-Wodonga). This is because:
- residents of one State use higher level regional or capital city services in another State
 - some services are unavailable in the local area
 - it is more convenient to use the services of other States for reasons such as employment and studies.
- 34 A cross-border disability is assessed when a net cross-border flow of services results in a State incurring a material level of extra costs and it is not reimbursed by other States.
- 35 If actual cross-border use data are available, the Commission uses them to assess cross-border needs. For a number of services, cross-border use data are not available. In these cases, for practicality reasons, the Commission makes a cross-border assessment for the ACT only. This is because Canberra acts as a major regional centre for south eastern New South Wales and the net costs incurred by the ACT are material.
- 36 The Commission's revenue assessments also recognise cross-border disabilities by taking into account that taxes can be exported to the residents of another State.

ASSESSMENT APPROACH

- 37 The Commission intends to make no general assessment of cross-border disabilities in the 2020 Review. Cross-border costs will be assessed in the relevant categories, on a case by case basis.
- 38 The Commission intends to retain the 2015 Review approaches to cross-border disabilities for Schools, Post-secondary education and Roads.
- 39 The Commission also expects the reimbursement arrangements for cross-border use of hospital services between the Commonwealth and the States to continue, and

therefore, intends to retain the current adjustments to the National Health Reform (NHR) funding payments.⁶

- 40 The Commission intends to retain a cross-border assessment for community health expenses based on updated evidence on cross-border use of ACT community health services by New South Wales residents and use of New South Wales community health services by ACT residents.
- 41 The Commission does not intend to apply a cross-border factor to residual State disability expenses, other general welfare expenses and recreation and culture expenses.
- 42 The following section provides an overview of the cross-border assessments. For further information on how cross-border use is captured, refer to the attachments for the relevant expense categories.

ASSESSMENT ISSUES

- 43 The ACT supported the Commission proposals in relation to Schools, Post-secondary education and Roads. Further details of these assessments will be provided in the relevant attachments.

Hospitals

- 44 The ACT disagreed with the Commission proposal in relation to hospitals. Under the National Health Reform Agreement, the ACT has a bilateral agreement with New South Wales for the costs of cross-border hospital patients. It sought cross-border adjustments for two aspects of hospital expenses related to this agreement.
 - It sought an adjustment of \$3.5 million to reflect that New South Wales imposed an annual two per cent volume growth cap to funding commitments under the bilateral agreement with the ACT and also limited the contribution to the national efficient price (NEP) rather than the ACT's actual costs.
 - It also sought an adjustment of \$10.5 million to reflect capital costs, which are not included in the bilateral agreement with New South Wales.
- 45 These issues are examined further in Attachment 12 – Health.

⁶ Clause 6(a)i in the 2019 Update terms of reference stated 'NHR funding and corresponding expenses relating to the provision of cross-border services to the residents of other States should be allocated to States on the basis of residence'. While the 2020 Review terms of reference do not include a similar specific direction, the Commission sees no reason to discontinue the approach taken. The NHR arrangements include specific provisions for the reimbursement of cross-border services.

Community health

- 46 The ACT supported the continuation of the cross-border adjustment for community health services and provided some preliminary data.
- 47 This issue is examined further in Attachment 12 — Health.

Welfare services

- 48 The ACT did not support the Commission proposal to discontinue the cross-border adjustments to homelessness and disability services. It said Australian Institute of Health and Welfare (AIHW) data indicated that some ACT homelessness services were accessed by New South Wales residents. It sought an adjustment of \$3.15 million to reflect these costs.
- 49 In addition, it sought an adjustment of \$9 million for cross-border use of out of home care. While this assessment did not have a cross-border adjustment in the 2015 Review, the ACT provided data that indicated a number of children on ACT court orders were receiving services from ACT agencies while placed in New South Wales residencies.
- 50 These issues are examined in Attachment 13 — Welfare.

Justice services

- 51 The ACT raised new cross-border claims relating to courts and corrective services costs. It sought an adjustment of \$3.8 million to reflect New South Wales residents' use of the ACT's court systems and \$4.5 million to reflect New South Wales residents' use of ACT corrective services.
- 52 These issues are examined in Attachment 16 — Justice.

Culture and recreation

- 53 The Commission intends to discontinue the cross-border assessments for culture and recreation as use of these services by New South Wales residents was unlikely to have a material impact on the ACT's costs.
- 54 The ACT was unable to provide the additional data for culture and recreation services in its submission.

The general method

- 55 The Commission intends to discontinue the general method in the 2020 Review. It proposes to make a direct assessment of cross-border costs in each category where an assessment is warranted.

REDISTRIBUTION FROM AN EPC ASSESSMENT

56 Table 5 shows the extent to which the assessment for this disability differs from an EPC assessment. States with a positive redistribution are assessed to have above average spending requirements and States with a negative redistribution are assessed to have below average spending requirements. In per capita terms, New South Wales and the ACT experience the redistributions in this assessment.

Table 5 Redistribution from an EPC assessment, cross-border disability, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	-23	0	0	0	0	0	23	0	23
\$ per capita	-3	0	0	0	0	0	56	0	1

Note: The redistribution is the difference from an EPC assessment.

Source: Commission calculation.

UPDATING THE ASSESSMENT

57 As required by the terms of reference, the Commission will incorporate the latest available data in the assessment during the annual updates. This will allow the assessment to reflect changes in State circumstances. All updating will be managed in their respective categories.

NATIVE TITLE AND LAND RIGHTS

- 59 The native title and land rights assessment recognises the additional costs incurred by the States due to the operation of:
- the Commonwealth's *Native Title Act 1993*
 - the Commonwealth's *Aboriginal Land Rights (Northern Territory) Act 1976* and comparable State legislation.

Native title

- 60 The Native Title legislation followed from a High Court decision that recognised Indigenous people's traditional rights on their land as common law.
- 61 Native title expenses include the costs of administering the legislation, compensating holders of native titles, the cost of processing future acts and associated compensation, and any on-going costs associated with joint management of land.
- 62 The expenses incurred in each State due to native title matters vary, depending on the number and type of native title and compensation claims made in the State as well as the number and nature of future acts⁷ processed.

Land rights

- 63 Land rights claims seek a grant of title to land from the Commonwealth or State governments. Different types of land rights laws in Australia allow for the grant of land to Indigenous Australians. Land rights schemes are in place in New South Wales, Victoria, Queensland, South Australia and the Northern Territory.⁸ The Northern Territory land rights scheme comes under a Commonwealth act, the *Aboriginal Land Rights (Northern Territory) Act 1976*, while the other States' land rights schemes come under State legislation.
- 64 States incur costs in negotiating claims, preparing submissions and in challenging claims through the courts. There are also ongoing costs associated with securing interests in land under land rights acts, administering legislation and joint management of land.

State expenses

- 65 State expenses on native title and land rights were \$182 million in 2017-18, representing 0.1% of total State expenses (Table 6).

⁷ Future acts can include exploration, mining, prospecting, building public infrastructure, tourist resorts, water licenses, some legislative changes and some lease renewals.

⁸ National Native Title Tribunal. 2007. *What's the difference between native title and land rights? Native title facts.*

Table 6 State expenses on native title and land rights by State, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Total expenses (\$m)	9	10	48	71	7	0	0	36	182
Total expenses (\$pc)	1	2	10	28	4	0	0	144	7
Proportion of operating expenses (%)	0.0	0.0	0.1	0.3	0.0	0.0	0.0	0.7	0.1

Source: Commission calculation using State budget data.

66 Table 7 shows the share of State expenses on native title and land rights from 2014-15 to 2017-18.

Table 7 State expenses on native title and land rights, 2014-15 to 2017-18

	2014-15	2015-16	2016-17	2017-18
Total expenses (\$m)	175	192	181	182
Proportion of total operating expenses (%)	0.1	0.1	0.1	0.1

Source: Commission calculation using State budget data.

Assessment approach

- 67 The assessment of native title and land rights expenses is undertaken in a single component in the Other expenses category. The expenses are sought from States annually.
- 68 The assessment of these costs is made on an actual per capita (APC) basis. The Commission considers this to be the simplest and most reliable way of assessing what States need to spend. State spending is due to Commonwealth legislation and, in the case of land rights, States have enacted similar legislation in response to their individual circumstances.
- 69 The expenses will be offset by any revenue States receive in relation to native title and land rights. Revenue may include, among other things, reimbursements from third parties in relation to native title compensation cases.

Assessment issues

- 70 The 2015 Review assessments provided the starting point for the 2020 Review. In April 2018, Commission staff released a draft assessment paper (DAP) setting out staff proposals for the Native title and land rights assessment. States provided submissions on the proposals. The staff proposals and State submissions are available on the [Commission website](https://cgc.gov.au) (<https://cgc.gov.au>).
- 71 The main assessment issues were:
- whether land rights expenses should be assessed for all States
 - how should native title and land rights expenses be assessed

72 States generally supported the retention of the APC assessment of native title and land rights expenses

73 The following sections discuss the main issues, including State views.⁹

Expenses included in the land rights assessment

74 In previous reviews, the Commission recognised land rights expenses only for the Northern Territory because its expenses were derived from Commonwealth legislation instead of State legislation. Its land rights expenses are around \$30 million annually.

75 However, State provided information shows that the average policy of States is to recognise land rights regardless of the presence of Commonwealth legislation. The Commission concludes that recognising land rights for all States would capture better what States do. The State information and consideration of Commonwealth and State land rights legislation show that:

- all States other than Western Australia, Tasmania and the ACT incur land rights expenses
- land rights expenses are small for all States other than Queensland (\$16 million in 2017-18) and the Northern Territory (\$31 million in 2017-18)
- some States have said it is difficult to untangle native title and land rights expenses
- land rights legislation differs across the States but the intent is the same, that is, to grant title to land from the Commonwealth or State governments
- some States use land rights as a means through which to meet their obligations under the Commonwealth’s *Native Title Act 1993*, such as through legislation like the *Traditional Owner Settlement Act 2010* (Vic) (*TOS Act*) and through a variety of Indigenous Land Use Agreements.

76 Table 8 shows the land rights expenses that States reported separately from native title expenses for 2017-18.

Table 8 State land rights expenses, 2017-18

	NSW (a)	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Land rights expenses	1	2	16	0	1	0	0	31	50

(a) This is a subset of the New South Wales’ land rights expenses. Some agencies were not able to provide the requested information in time for the draft report. Similar data will be sought for the final report.

Source: State data returns for the 2020 Review.

⁹ State submissions often include significant detail and supporting evidence. In this attachment, the Commission responds to the arguments and evidence States presented in their submissions. For the full detail of State submissions, see the [Commission website](https://cgc.gov.au) (https://cgc.gov.au).

The assessment of native title and land rights expenses

- 77 The Commission intends to continue to assess native title and land rights expenses on an APC basis for the 2020 Review. The Commission considers that States are following the general frameworks for the implementation of native title and land rights legislation, which are imposed by the Commonwealth. However, States have adapted them to fit their own circumstances. The focus of States has been on implementing cost-effective processes (such as moving from litigation to negotiation).
- 78 Most States supported the current APC assessment and were comfortable providing native title and land rights expenses annually.
- 79 The Commission notes the recent High Court ruling that the Northern Territory must pay \$2.53 million in compensation to the Ngaliwurru and Nungali peoples in compensation for acts of the Northern Territory government that impaired or extinguished native title rights and interests. The Commission intends to continue to monitor such compensation cases and State responses to them in order to ensure an APC assessment remains appropriate.
- 80 Further, in order to recognise any reimbursements the States may receive from third parties in relation to such compensation cases, the Commission will request information on any such payments alongside the annual native title data request. Such payments will then be netted-off State expenses relating to native title.
- 81 New South Wales was concerned about possible State policy influence on native title spending. As an alternative to the APC assessment, it suggested an assessment based on econometric analysis, using shares of Indigenous population and the value of mineral production or reserves as explanatory variables.
- 82 New South Wales noted that using an assessment based on regression analysis would also relieve the Commission of the need to collect data annually.
- 83 Victoria cautioned against the use of alternative assessments that assume average annual costs based on past years. Victoria anticipated significant variation of expenses from year to year as native title settlements under the *Traditional Owner Settlement Act 2010* (Vic) (*TOS Act*) are reached and settlements are made.
- 84 While South Australia was open to assessment options that do not require the annual collection of data from the States, it acknowledged native title expenses are volatile and historical data may not be a good predictor of the future expenses.
- 85 While the ACT suggested alternative measures of need relating to land rights, such as the number of different Aboriginal and Torres Strait islander languages in each State, the Commission considers an APC assessment of State land rights expenses is appropriate. States tend to provide these services in cost effective ways and any differences in the level of expenses reflect their circumstances.

86 The Commission is satisfied that States are following the framework for the implementation of native title and land rights legislation and that the expenses are not unduly influenced by specific State policies. States have little incentive to spend more than necessary. Indeed, States are adopting cost minimisation strategies. The Commission is not convinced that the alternative measures proposed by States would capture the volatility of these expenses.

ASSESSED EXPENSES CALCULATION

87 Table 9 shows the calculation of native title and land rights assessed expenses in 2017-18.

88 The expenses are assessed on an APC basis as a separate component of the Other expenses category.

Table 9 Illustrative assessment, native title and land rights, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
\$ million	9	10	48	71	7	0	0	36	182
\$ per capita	1	2	10	28	4	0	0	144	7

Source: Commission calculation.

REDISTRIBUTION FROM AN EPC ASSESSMENT

89 Table 10 shows the extent to which the assessment of native title and land rights expenses differs from an EPC assessment of native title and land rights expenses. States with a positive redistribution are assessed to have above average spending requirements and States with a negative redistribution are assessed to have below average spending requirements. In per capita terms, the Northern Territory experiences the largest redistribution. The assessment is not material for any other State.

Table 10 Redistribution from an EPC assessment, native title and land rights, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	-49	-36	12	52	-6	-4	-3	34	98
\$ per capita	-6	-6	2	20	-3	-7	-7	137	4

Note: The redistribution is the difference from an EPC assessment of expenses.

Source: Preliminary staff estimate.

- 90 The main reasons for differences in native title and land rights expenses, and therefore, differences in these redistributions are the differences between States in:
- the size of their remote Indigenous populations
 - the number of Indigenous groups who have retained a continuing connection to the land
 - the history of land development and economic activity in a State
 - the location of claims and competing interests in the areas claimed.

UPDATING THE ASSESSMENT

- 91 As required by the terms of reference, the Commission will incorporate the latest available data in the assessment during the annual updates. This will allow the assessment to reflect changes in State circumstances. State data on expenses relating to native title and land rights will be updated annually through a State data request.

OUTSTANDING ISSUES

- 92 From the Commission's perspective, there are no outstanding issues for this assessment.

FURTHER CONSULTATION

- 93 Before the release of the final report by 28 February 2020, there will be opportunities for consultation on this assessment. For further information about this category, please contact Kathleen Morris at kathleen.morris@cgc.gov.au.

ATTACHMENT 26

OTHER DISABILITIES

Summary of proposed changes to the 2015 Review methodology

- National capital planning allowances have been revised.
- National capital allowances for wider roads, above average urban space, above average urban/bush interface and bus subsidies are no longer being assessed.
- The general method of estimating cross-border costs has been discontinued and a cross-border factor will not be applied to welfare expenses and recreation and culture expenses.
- The remaining cross-border assessments are considered in their relevant attachments.
- Land rights expenses are assessed for all States (not just the Northern Territory). They are assessed on an actual per capita basis.
- The native title and land rights expenses are assessed together as some States indicated they could not be reliably separated.

1 This attachment contains the Commission's draft proposals for the Other disabilities following consultation with the Commonwealth and States. Other disabilities include the following:

- national capital
- cross-border
- native title and land rights.

NATIONAL CAPITAL

- 2 National capital allowances recognise the unavoidable extra costs incurred by the ACT, because of Canberra’s status as the national capital or because of legacies inherited from the Commonwealth at self-government, that continue to affect its costs of service delivery.

ASSESSMENT STRUCTURE

- 3 The Commission intends to assess the following national capital allowances in the 2020 Review.

Table 1 National capital allowances, 2020 Review

Disability	Influence measured by disability
Planning	Recognises the additional costs due to the impact of the National Capital Plan on planning and development activities, the administrative costs of capital works and maintenance of the leasehold system.
Police	Recognises the additional costs to the ACT from using the Australian Federal Police to provide police services.

Source: Commission decision.

ASSESSMENT APPROACH

- 4 The assessment includes two types of national capital allowances:
 - planning allowances, which recognise the higher costs to the ACT in relation to planning and development activities due to the operation of the National Capital Plan (NCP) and the costs associated with maintaining the leasehold system
 - a police allowance, which recognises that the ACT has no practical alternative but to use the Australian Federal Police (AFP) as the provider of its policing services and it has no control over the above average salaries paid to AFP employees.

Planning allowances

- 5 In its rejoinder submission, the ACT provided new evidence on the cost of planning allowances. The Commission intends to use those data as the basis for the planning allowances to be assessed in 2017-18. The allowances for other assessment years will be determined by indexing the 2017-18 amounts using the State and local government final consumption expenditure (SLGFCE) chain price index.
- 6 Table 2 shows the assessed planning allowances for 2017-18 in the 2020 Review.

Table 2 National capital allowances, planning allowances, 2020 Review

	2017-18
	\$m
Planning	
The impact of the National Capital Plan on planning and development activities	1.8
Costs incurred by the ACT in operating a leasehold system	2.5
The impact of the National Capital Plan on the ACT’s capital works program	2.2

Source: Commission calculations and the ACT Rejoinder Submission.

Police allowance

- 7 Table 3 shows that the police allowance is calculated by:
 - deriving a notional level of ACT police staffing by applying the national average per capita number of police staff (sworn and unsworn staff combined) to the ACT’s population
 - multiplying that notional staffing level by the difference between the average AFP and the average State police staff salaries (sworn and unsworn staff combined), discounted for the ACT’s wage costs factor to avoid double counting the higher underlying wage levels in the ACT.
- 8 The national average staffing level is adjusted because the ACT’s socio-demographic characteristics examined in the Justice assessment indicate that it needs less than the average police staff to population ratio. The ACT staffing level is calculated by adjusting the national average per capita level of police staff for the ACT’s justice services socio-demographic characteristics¹ and its population.
- 9 The staffing and salaries data are sourced from the Productivity Commission’s *Report on Government Services*, which is a reliable and comparable data source. The assessment is updated annually. However, due to the time lag in the production of the report, the Commission indexes the most recently calculated allowance using ABS’ national public sector wage price index.

¹ Due to changes in the Justice assessment the policing task acts as a proxy for socio-demographic characteristics.

Table 3 National capital allowance, police services

	Unit	2014-15	2015-16	2016-17	2017-18
Calculate notional ACT staffing					
A. Total staff	no.	69 282	70 652	72 680	72 680
B. Total population	'000	23 637	23 981	24 385	24 770
C. Average staff [C = A / B]	no.	0.003	0.003	0.003	0.003
D. ACT population	'000	391	398	407	416
E. Assessed staff [E = C * D]	no.	1 149	1 175	1 215	1 221
F. ACT socio-demographic characteristics factor		0.761	0.762	0.763	0.764
G. Adjusted assessed staff [G = E * F]	no.	874	895	927	933
Calculate difference in salaries					
H. Average State salary (a)	\$	119 397	121 093	118 505	118 505
I. ACT wage costs factor		1.020	1.035	1.045	1.054
J. Adjusted State salary [J = H * I]	\$	121 823	125 320	123 839	124 864
K. Average ACT salary (a)	\$	134 427	130 146	133 023	133 023
L. Difference [L = K - J]	\$	12 604	4 826	9 184	8 159
M. Wage price index adjustment		1.000	1.000	1.000	1.024
N. Difference in salaries [N = L * M]	\$	12 604	4 826	9 184	8 351
Calculate police allowance					
O. Assessed allowance [O = G * N]	\$m	11.0	4.3	8.5	7.8

(a) Excludes payroll tax because the AFP is exempt from paying payroll tax.

Source: Productivity Commission, *Report on Government Services*.

ABS, *Wage Price Index*, Cat. No. 6345.0, ABS Canberra, Table 4a.

ASSESSMENT ISSUES

10 The 2015 Review assessments provided the starting point for the 2020 Review. In April 2018, Commission staff released a draft assessment paper setting out staff proposals for the national capital assessment. States provided submissions on the proposals. The staff proposals and State submissions are available on the [Commission website](https://cgc.gov.au), (<https://cgc.gov.au>).

11 The main issues for the assessment were:

- planning allowances
- police services.

Planning allowances

12 In 1989, when the ACT was granted self-government, the Commonwealth established the National Capital Authority (NCA) to manage its continuing interest in the strategic planning and development of Canberra as the nation's capital. The NCA did so, in

part, through the development and management of the NCP. The NCP placed restrictions on planning and development decisions in the ACT and the Commission considered it led to higher costs for the ACT Government. The Commission also concluded similar additional costs were not incurred by other States.

- 13 As it has been some time since these allowances have been comprehensively reviewed, the Commission decided that the conceptual case for them would have to be re-established in the 2020 Review,² as the ACT's circumstances may have changed since those allowances were first introduced in the 1999 Review. The ACT Government has had the time to adapt its practices to reduce the financial impact of the NCA and NCP on the ACT's planning, land management and other matters inherited from the Commonwealth. Further, the NCA was undertaking a reform process to modernise the NCP, which could reduce the costs imposed on the ACT.
- 14 The Commission noted that other States incurred costs in their planning, land management and capital works activities from having to interact with other levels of government. They also faced circumstances outside their control, for example, having to deal with world heritage sites.³
- 15 The ACT said there was a strong case for continuing these planning allowances. It argued that the additional costs imposed on it were a structural feature of the dual planning system in place since self-government and showed little prospect of change. The constraints of the NCP continued to impose additional direct staffing costs on the ACT, chiefly regarding individual project elements to ensure they conform (in the view of the NCA) with the NCP. Additional staff resources were also required to obtain NCA approval for amendments to the Territory Plan.
- 16 The ACT said the NCP related costs were growing as the ACT grows – both in terms of its population and its economy. It sought an allowance of \$1.8 million for NCP related **planning and development activities**. Its claim was equivalent to an extra 10.3 full time equivalent staff over four agencies, plus some minor consultancy costs.
- 17 The ACT said its **capital works** program continued to face additional unavoidable costs directly linked to the NCP. It listed a number of projects and calculated an additional \$13 million per year associated with higher design specifications, time delays and additional administrative requirements. It said this was partly offset by improved amenity and design outcomes in the order of \$3 million per year, for a net cost to the ACT of \$10 million per year.
- 18 The ACT sought a new allowance for extra costs associated with its **light rail project**, due to the NCA imposed requirement for higher quality landscaping and fixtures.

² The ACT's planning allowances were last comprehensively considered in the 2004 Review.

³ World heritage sites are governed by Commonwealth legislation. The ACT is the only State without a world heritage site.

- 19 The ACT said it had 24 staff dedicated to the operation of its **leasehold system**, 20 of whom performed functions that did not exist in freehold systems other States. It said this translated to an additional cost of \$2.5 million per year.
- 20 The Commission considers the ACT has made the conceptual case for planning allowances associated with the NCP, but only those relating to planning and development activities, the administrative component of capital works projects and operation of the leasehold system. The Commission intends to continue to assess an allowance for the additional cost to the ACT's **planning and development activities** due to the NCP and use the updated estimate provided by the ACT as the allowance for the 2017-18 assessment year.
- 21 While the Commission considers there to be a case for the extra administrative costs of the dual planning system, the case is less clear for the costs associated with higher quality assets and materials required in capital works projects, particularly since these have some offsetting benefits to the ACT which are difficult to quantify. The Commission notes that, in relation to both the light rail project and other capital works, the majority of the additional costs cited by the ACT reflect acquisition of higher quality assets, rather than the administrative costs of interacting with the NCA. These higher asset costs, especially in the cost of transport, also appear to be informed by the choice of transport mode. This makes it difficult to determine the ACT's unavoidable capital costs.
- 22 The Commission intends to assess an allowance for the additional administrative costs imposed on the ACT in relation to **capital works**, but not for the ACT's other claims in relation to capital works and the **light rail project**.⁴ Based on the ACT's rejoinder submission, the Commission intends to assess an allowance of \$2.2 million for these additional administrative costs in 2017-18.⁵
- 23 The Commission first accepted the extra costs to the ACT due to its leasehold system in the 2004 Review. The ACT does not have the option to move to a freehold system. It is the only State to operate a leasehold system only. In its rejoinder submission, the ACT provided updated information on the staff required to manage those aspects of the leasehold system that have no equivalent in a freehold system. These activities included renewing leases, transferring leases, providing advice, making determinations on concessional leases and managing lease variations and their associated charges. The Commission intends to continue to assess an allowance for the extra costs imposed on the ACT due to the requirement to maintain a **leasehold system** using the updated data provided by the ACT.

⁴ The ACT's other claims related to the need for higher quality design and material specifications, time delays imposed on developments and additional operating costs for the light rail.

⁵ The ACT's rejoinder submission indicates that administrative costs represent about 15% of the \$13 million additional cost of capital works due to the NCP (about \$2 million), and about 3.4% of the additional costs of the light rail project due to the NCP (equivalent to about \$0.2 million per year).

- 24 The ACT raised a number of claims relating to **urban form**, additional services provided to the Commonwealth Government and roads. The Commission does not intend to assess allowances for these claims.
- 25 In relation to urban form, while the ACT's calculation shows that Canberra has an above average ratio of greenspace, it is comparable with Perth, Hobart and Darwin. In addition, the ACT has clear capacity to manage its level of open space, as evidenced by its urban infill policies. The Commission considers the ACT's claim with regard to services provided to the Commonwealth government relate to its level of funding via a multilateral memorandum of understanding (MoU), and hence is outside the scope of the national capital assessment.
- 26 The wider roads allowance has been discontinued. This is consistent with the Commission's decision when it first assessed this allowance, in its 2004 Review. It also decided the length of time the allowance would be retained.

Indexing

- 27 In the 2015 Review, national capital allowances were indexed by the State and local general government final consumption expenditure (SLGFCE) chain price index. SLGFCE is a national accounts aggregate that reflects the expenditure of States. The Commission considers that indexing using SLGFCE remains the most appropriate approach to updating the assessment.

Police allowance

Analysis

- 28 The Commission accepts the ACT has no practical alternative but to use the AFP as the provider of its policing services. This leads to higher costs because the AFP pays above average salaries to its employees.
- 29 The foundation of the constraints on the ACT's policing arrangements lies in:
- the *Australian Capital Territory (Self-Government) Act 1988* – section 23(1)(c), which says: '...the [ACT Legislative] Assembly has no power to make laws with respect to ... the provision by the Australian Federal Police of police services in relation to the Territory'
 - Section 28 of the same Act, which states that any law passed by the ACT Legislative Assembly will have no effect if it is inconsistent with '...a [Federal] law in force in the Territory...'
 - Section 8(1)(a) of the *Australian Federal Police Act 1979*, which states that a primary function of the AFP is '... the provision of police services in relation to the Australian Capital Territory.'

30 The Commission intends to retain the police allowance and assess it using the method shown in Table 3.

REDISTRIBUTION FROM AN EPC ASSESSMENT

31 Table 4 shows the extent to which the assessment for this disability differs from an equal per capita (EPC) assessment. States with a positive redistribution are assessed to have above average spending requirements and States with a negative redistribution are assessed to have below average spending requirements. In per capita terms, the ACT experiences the largest redistribution.

Table 4 **Redistribution from an EPC assessment, national capital allowance, 2017-18**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	-5	-4	-3	-1	-1	0	14	0	14
\$ per capita	-1	-1	-1	-1	-1	-1	33	-1	1

Note: The redistribution is the difference from an EPC assessment of expenses.

Source: Commission calculation.

UPDATING THE ASSESSMENT

32 As required by the terms of reference, the Commission will incorporate the latest available data in the assessment during the annual updates. This will allow the assessment to reflect changes in State circumstances.

- The following data will be updated annually:
 - The staffing and salaries data, sourced from the Productivity Commission’s *Report on Government Services*
 - State and local government final consumption expenditure index chain price data.

CROSS-BORDER

- 33 Cross-border costs are incurred when residents of one State use services provided by another. Cross-border flows can occur across any border (for example, the New South Wales-Queensland border in the region of Tweed Heads-Coolangatta, or the New South Wales-Victoria border around Albury-Wodonga). This is because:
- residents of one State use higher level regional or capital city services in another State
 - some services are unavailable in the local area
 - it is more convenient to use the services of other States for reasons such as employment and studies.
- 34 A cross-border disability is assessed when a net cross-border flow of services results in a State incurring a material level of extra costs and it is not reimbursed by other States.
- 35 If actual cross-border use data are available, the Commission uses them to assess cross-border needs. For a number of services, cross-border use data are not available. In these cases, for practicality reasons, the Commission makes a cross-border assessment for the ACT only. This is because Canberra acts as a major regional centre for south eastern New South Wales and the net costs incurred by the ACT are material.
- 36 The Commission's revenue assessments also recognise cross-border disabilities by taking into account that taxes can be exported to the residents of another State.

ASSESSMENT APPROACH

- 37 The Commission intends to make no general assessment of cross-border disabilities in the 2020 Review. Cross-border costs will be assessed in the relevant categories, on a case by case basis.
- 38 The Commission intends to retain the 2015 Review approaches to cross-border disabilities for Schools, Post-secondary education and Roads.
- 39 The Commission also expects the reimbursement arrangements for cross-border use of hospital services between the Commonwealth and the States to continue, and

therefore, intends to retain the current adjustments to the National Health Reform (NHR) funding payments.⁶

- 40 The Commission intends to retain a cross-border assessment for community health expenses based on updated evidence on cross-border use of ACT community health services by New South Wales residents and use of New South Wales community health services by ACT residents.
- 41 The Commission does not intend to apply a cross-border factor to residual State disability expenses, other general welfare expenses and recreation and culture expenses.
- 42 The following section provides an overview of the cross-border assessments. For further information on how cross-border use is captured, refer to the attachments for the relevant expense categories.

ASSESSMENT ISSUES

- 43 The ACT supported the Commission proposals in relation to Schools, Post-secondary education and Roads. Further details of these assessments will be provided in the relevant attachments.

Hospitals

- 44 The ACT disagreed with the Commission proposal in relation to hospitals. Under the National Health Reform Agreement, the ACT has a bilateral agreement with New South Wales for the costs of cross-border hospital patients. It sought cross-border adjustments for two aspects of hospital expenses related to this agreement.
 - It sought an adjustment of \$3.5 million to reflect that New South Wales imposed an annual two per cent volume growth cap to funding commitments under the bilateral agreement with the ACT and also limited the contribution to the national efficient price (NEP) rather than the ACT's actual costs.
 - It also sought an adjustment of \$10.5 million to reflect capital costs, which are not included in the bilateral agreement with New South Wales.
- 45 These issues are examined further in Attachment 12 – Health.

⁶ Clause 6(a)i in the 2019 Update terms of reference stated 'NHR funding and corresponding expenses relating to the provision of cross-border services to the residents of other States should be allocated to States on the basis of residence'. While the 2020 Review terms of reference do not include a similar specific direction, the Commission sees no reason to discontinue the approach taken. The NHR arrangements include specific provisions for the reimbursement of cross-border services.

Community health

- 46 The ACT supported the continuation of the cross-border adjustment for community health services and provided some preliminary data.
- 47 This issue is examined further in Attachment 12 — Health.

Welfare services

- 48 The ACT did not support the Commission proposal to discontinue the cross-border adjustments to homelessness and disability services. It said Australian Institute of Health and Welfare (AIHW) data indicated that some ACT homelessness services were accessed by New South Wales residents. It sought an adjustment of \$3.15 million to reflect these costs.
- 49 In addition, it sought an adjustment of \$9 million for cross-border use of out of home care. While this assessment did not have a cross-border adjustment in the 2015 Review, the ACT provided data that indicated a number of children on ACT court orders were receiving services from ACT agencies while placed in New South Wales residencies.
- 50 These issues are examined in Attachment 13 — Welfare.

Justice services

- 51 The ACT raised new cross-border claims relating to courts and corrective services costs. It sought an adjustment of \$3.8 million to reflect New South Wales residents' use of the ACT's court systems and \$4.5 million to reflect New South Wales residents' use of ACT corrective services.
- 52 These issues are examined in Attachment 16 — Justice.

Culture and recreation

- 53 The Commission intends to discontinue the cross-border assessments for culture and recreation as use of these services by New South Wales residents was unlikely to have a material impact on the ACT's costs.
- 54 The ACT was unable to provide the additional data for culture and recreation services in its submission.

The general method

- 55 The Commission intends to discontinue the general method in the 2020 Review. It proposes to make a direct assessment of cross-border costs in each category where an assessment is warranted.

REDISTRIBUTION FROM AN EPC ASSESSMENT

56 Table 5 shows the extent to which the assessment for this disability differs from an EPC assessment. States with a positive redistribution are assessed to have above average spending requirements and States with a negative redistribution are assessed to have below average spending requirements. In per capita terms, New South Wales and the ACT experience the redistributions in this assessment.

Table 5 Redistribution from an EPC assessment, cross-border disability, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	-23	0	0	0	0	0	23	0	23
\$ per capita	-3	0	0	0	0	0	56	0	1

Note: The redistribution is the difference from an EPC assessment.

Source: Commission calculation.

UPDATING THE ASSESSMENT

57 As required by the terms of reference, the Commission will incorporate the latest available data in the assessment during the annual updates. This will allow the assessment to reflect changes in State circumstances. All updating will be managed in their respective categories.

NATIVE TITLE AND LAND RIGHTS

- 59 The native title and land rights assessment recognises the additional costs incurred by the States due to the operation of:
- the Commonwealth's *Native Title Act 1993*
 - the Commonwealth's *Aboriginal Land Rights (Northern Territory) Act 1976* and comparable State legislation.

Native title

- 60 The Native Title legislation followed from a High Court decision that recognised Indigenous people's traditional rights on their land as common law.
- 61 Native title expenses include the costs of administering the legislation, compensating holders of native titles, the cost of processing future acts and associated compensation, and any on-going costs associated with joint management of land.
- 62 The expenses incurred in each State due to native title matters vary, depending on the number and type of native title and compensation claims made in the State as well as the number and nature of future acts⁷ processed.

Land rights

- 63 Land rights claims seek a grant of title to land from the Commonwealth or State governments. Different types of land rights laws in Australia allow for the grant of land to Indigenous Australians. Land rights schemes are in place in New South Wales, Victoria, Queensland, South Australia and the Northern Territory.⁸ The Northern Territory land rights scheme comes under a Commonwealth act, the *Aboriginal Land Rights (Northern Territory) Act 1976*, while the other States' land rights schemes come under State legislation.
- 64 States incur costs in negotiating claims, preparing submissions and in challenging claims through the courts. There are also ongoing costs associated with securing interests in land under land rights acts, administering legislation and joint management of land.

State expenses

- 65 State expenses on native title and land rights were \$182 million in 2017-18, representing 0.1% of total State expenses (Table 6).

⁷ Future acts can include exploration, mining, prospecting, building public infrastructure, tourist resorts, water licenses, some legislative changes and some lease renewals.

⁸ National Native Title Tribunal. 2007. *What's the difference between native title and land rights? Native title facts.*

Table 6 State expenses on native title and land rights by State, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Total expenses (\$m)	9	10	48	71	7	0	0	36	182
Total expenses (\$pc)	1	2	10	28	4	0	0	144	7
Proportion of operating expenses (%)	0.0	0.0	0.1	0.3	0.0	0.0	0.0	0.7	0.1

Source: Commission calculation using State budget data.

66 Table 7 shows the share of State expenses on native title and land rights from 2014-15 to 2017-18.

Table 7 State expenses on native title and land rights, 2014-15 to 2017-18

	2014-15	2015-16	2016-17	2017-18
Total expenses (\$m)	175	192	181	182
Proportion of total operating expenses (%)	0.1	0.1	0.1	0.1

Source: Commission calculation using State budget data.

Assessment approach

- 67 The assessment of native title and land rights expenses is undertaken in a single component in the Other expenses category. The expenses are sought from States annually.
- 68 The assessment of these costs is made on an actual per capita (APC) basis. The Commission considers this to be the simplest and most reliable way of assessing what States need to spend. State spending is due to Commonwealth legislation and, in the case of land rights, States have enacted similar legislation in response to their individual circumstances.
- 69 The expenses will be offset by any revenue States receive in relation to native title and land rights. Revenue may include, among other things, reimbursements from third parties in relation to native title compensation cases.

Assessment issues

- 70 The 2015 Review assessments provided the starting point for the 2020 Review. In April 2018, Commission staff released a draft assessment paper (DAP) setting out staff proposals for the Native title and land rights assessment. States provided submissions on the proposals. The staff proposals and State submissions are available on the [Commission website](https://cgc.gov.au) (<https://cgc.gov.au>).
- 71 The main assessment issues were:
- whether land rights expenses should be assessed for all States
 - how should native title and land rights expenses be assessed

72 States generally supported the retention of the APC assessment of native title and land rights expenses

73 The following sections discuss the main issues, including State views.⁹

Expenses included in the land rights assessment

74 In previous reviews, the Commission recognised land rights expenses only for the Northern Territory because its expenses were derived from Commonwealth legislation instead of State legislation. Its land rights expenses are around \$30 million annually.

75 However, State provided information shows that the average policy of States is to recognise land rights regardless of the presence of Commonwealth legislation. The Commission concludes that recognising land rights for all States would capture better what States do. The State information and consideration of Commonwealth and State land rights legislation show that:

- all States other than Western Australia, Tasmania and the ACT incur land rights expenses
- land rights expenses are small for all States other than Queensland (\$16 million in 2017-18) and the Northern Territory (\$31 million in 2017-18)
- some States have said it is difficult to untangle native title and land rights expenses
- land rights legislation differs across the States but the intent is the same, that is, to grant title to land from the Commonwealth or State governments
- some States use land rights as a means through which to meet their obligations under the Commonwealth’s *Native Title Act 1993*, such as through legislation like the *Traditional Owner Settlement Act 2010* (Vic) (*TOS Act*) and through a variety of Indigenous Land Use Agreements.

76 Table 8 shows the land rights expenses that States reported separately from native title expenses for 2017-18.

Table 8 State land rights expenses, 2017-18

	NSW (a)	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Land rights expenses	1	2	16	0	1	0	0	31	50

(a) This is a subset of the New South Wales’ land rights expenses. Some agencies were not able to provide the requested information in time for the draft report. Similar data will be sought for the final report.

Source: State data returns for the 2020 Review.

⁹ State submissions often include significant detail and supporting evidence. In this attachment, the Commission responds to the arguments and evidence States presented in their submissions. For the full detail of State submissions, see the [Commission website](https://cgc.gov.au) (https://cgc.gov.au).

The assessment of native title and land rights expenses

- 77 The Commission intends to continue to assess native title and land rights expenses on an APC basis for the 2020 Review. The Commission considers that States are following the general frameworks for the implementation of native title and land rights legislation, which are imposed by the Commonwealth. However, States have adapted them to fit their own circumstances. The focus of States has been on implementing cost-effective processes (such as moving from litigation to negotiation).
- 78 Most States supported the current APC assessment and were comfortable providing native title and land rights expenses annually.
- 79 The Commission notes the recent High Court ruling that the Northern Territory must pay \$2.53 million in compensation to the Ngaliwurru and Nungali peoples in compensation for acts of the Northern Territory government that impaired or extinguished native title rights and interests. The Commission intends to continue to monitor such compensation cases and State responses to them in order to ensure an APC assessment remains appropriate.
- 80 Further, in order to recognise any reimbursements the States may receive from third parties in relation to such compensation cases, the Commission will request information on any such payments alongside the annual native title data request. Such payments will then be netted-off State expenses relating to native title.
- 81 New South Wales was concerned about possible State policy influence on native title spending. As an alternative to the APC assessment, it suggested an assessment based on econometric analysis, using shares of Indigenous population and the value of mineral production or reserves as explanatory variables.
- 82 New South Wales noted that using an assessment based on regression analysis would also relieve the Commission of the need to collect data annually.
- 83 Victoria cautioned against the use of alternative assessments that assume average annual costs based on past years. Victoria anticipated significant variation of expenses from year to year as native title settlements under the *Traditional Owner Settlement Act 2010* (Vic) (*TOS Act*) are reached and settlements are made.
- 84 While South Australia was open to assessment options that do not require the annual collection of data from the States, it acknowledged native title expenses are volatile and historical data may not be a good predictor of the future expenses.
- 85 While the ACT suggested alternative measures of need relating to land rights, such as the number of different Aboriginal and Torres Strait islander languages in each State, the Commission considers an APC assessment of State land rights expenses is appropriate. States tend to provide these services in cost effective ways and any differences in the level of expenses reflect their circumstances.

86 The Commission is satisfied that States are following the framework for the implementation of native title and land rights legislation and that the expenses are not unduly influenced by specific State policies. States have little incentive to spend more than necessary. Indeed, States are adopting cost minimisation strategies. The Commission is not convinced that the alternative measures proposed by States would capture the volatility of these expenses.

ASSESSED EXPENSES CALCULATION

87 Table 9 shows the calculation of native title and land rights assessed expenses in 2017-18.

88 The expenses are assessed on an APC basis as a separate component of the Other expenses category.

Table 9 Illustrative assessment, native title and land rights, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
\$ million	9	10	48	71	7	0	0	36	182
\$ per capita	1	2	10	28	4	0	0	144	7

Source: Commission calculation.

REDISTRIBUTION FROM AN EPC ASSESSMENT

89 Table 10 shows the extent to which the assessment of native title and land rights expenses differs from an EPC assessment of native title and land rights expenses. States with a positive redistribution are assessed to have above average spending requirements and States with a negative redistribution are assessed to have below average spending requirements. In per capita terms, the Northern Territory experiences the largest redistribution. The assessment is not material for any other State.

Table 10 Redistribution from an EPC assessment, native title and land rights, 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
\$ million	-49	-36	12	52	-6	-4	-3	34	98
\$ per capita	-6	-6	2	20	-3	-7	-7	137	4

Note: The redistribution is the difference from an EPC assessment of expenses.

Source: Preliminary staff estimate.

- 90 The main reasons for differences in native title and land rights expenses, and therefore, differences in these redistributions are the differences between States in:
- the size of their remote Indigenous populations
 - the number of Indigenous groups who have retained a continuing connection to the land
 - the history of land development and economic activity in a State
 - the location of claims and competing interests in the areas claimed.

UPDATING THE ASSESSMENT

- 91 As required by the terms of reference, the Commission will incorporate the latest available data in the assessment during the annual updates. This will allow the assessment to reflect changes in State circumstances. State data on expenses relating to native title and land rights will be updated annually through a State data request.

OUTSTANDING ISSUES

- 92 From the Commission's perspective, there are no outstanding issues for this assessment.

FURTHER CONSULTATION

- 93 Before the release of the final report by 28 February 2020, there will be opportunities for consultation on this assessment. For further information about this category, please contact Kathleen Morris at kathleen.morris@cgc.gov.au.

ATTACHMENT 27

POPULATION DATA SUPPORTING THE ASSESSMENTS

- 1 This attachment provides details of the main population data used in Commission calculations.

ESTIMATED RESIDENT POPULATION

- 2 For all its assessments, and its overall relativities, the Commission requires population level estimates. For many assessments, it requires population data on a range of population groups disaggregated by various characteristics related to the differential use or cost of services, for example, age, sex, Indigenous status, socio-economic status (SES) and remoteness.
- 3 All estimated resident population (ERP) data the Commission uses come from the Australian Bureau of Statistics (ABS). Most of these data are received through a special data request. ERP data used in the category assessments are final 2016 Census data.¹

Population level estimates

- 4 For assessments that require estimates of the size of total State populations, the Commission uses estimates as at 31 December, which is the middle of the financial year. This is the population series used for calculating:
 - equal per capita (EPC) distributions
 - disability factors
 - population growth
 - per capita relativities.
- 5 Table 1 shows the State ERP for each assessment year and the application year that will be used in the draft report.

¹ During the course of the review, 2021 Census data will become available. States will be consulted on the timing and process for incorporating new census data.

Table 1 Estimated resident population, by State, at 31 December

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	'000	'000	'000	'000	'000	'000	'000	'000	'000
2015-16	7 671	6 093	4 805	2 548	1 706	516	399	244	23 982
2016-17	7 802	6 245	4 884	2 564	1 717	520	407	246	24 385
2017-18	7 921	6 386	4 964	2 584	1 728	525	416	247	24 770
2019-20 appl. year	8 219	6 698	5 128	2 645	1 759	531	430	249	25 658
	%	%	%	%	%	%	%	%	%
2015-16	32.0	25.4	20.0	10.6	7.1	2.2	1.7	1.0	100.0
2016-17	32.0	25.6	20.0	10.5	7.0	2.1	1.7	1.0	100.0
2017-18	32.0	25.8	20.0	10.4	7.0	2.1	1.7	1.0	100.0
2019-20 appl. year	32.0	26.1	20.0	10.3	6.9	2.1	1.7	1.0	100.0

Note: The total excludes the populations of Jervis Bay, Cocos (Keeling) Islands, Christmas Island and Norfolk Island.

Sources: ABS, June 2018, *Australian Demographic Statistics*, cat. no. 3101.0, Table 4, Estimated Resident Population, States and Territories. Application year population estimates are provided by the Commonwealth Treasury.

Disaggregated data

- 6 The Commission receives administrative data on the use and cost of services from States and other parties. These data are used to identify the characteristics of higher (or lower) cost population groups in the provision of State services. Population data are required so that national costs for these population groups can be distributed across States based on their share of that population group.
- 7 For disaggregated ERP, conceptually the Commission requires populations as at 31 December since this is the mid-point of the financial year. However, 31 December populations are not available from the ABS as it provides 30 June population data annually, disaggregated by age, sex, and geography (including remoteness and SES). Therefore, the Commission scales 30 June disaggregated population data to State total populations as of 31 December for each year. For example, 30 June 2017 disaggregated ERP are scaled to State total populations at 31 December 2017. The scaled ERP data are used for the 2017-18 financial year.

Indigenous status

- 8 Apart from the Census year, the ABS does not provide population data disaggregated by Indigenous status. As a result, for subsequent years the Commission imputes Indigenous population estimates. This is done by applying the Indigenous share of the total population within each disaggregated population group (in the Census year) and then adjusting this to match the ABS estimated Indigenous population projections at 30 June each year, by age and State. The resulting estimated numbers of Indigenous

people in each disaggregated group are subtracted from the group's total to give the number of non-Indigenous people in the group.

Use of Statistical Area Level 1 (SA1) based classifications

- 9 The most accurate disaggregation of population by remoteness and SES is that based on classifications at Statistical Area Level 1 (SA1) geography. While it would be ideal if administrative data provided by the Commonwealth, States and third parties was also available at the SA1 level, this is rarely possible. In practice, the Commission receives administrative data on the use and cost of services from States and other third parties that reflect varying geographies.

Population growth estimates

- 10 Table 2 contains States' estimated annual growth rates for ERP during the assessment period.

Table 2 State population growth rates, 2015-16 to 2017-18

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ave
	%	%	%	%	%	%	%	%	%
2015-16	1.4	2.3	1.2	0.8	0.8	0.3	1.8	0.6	1.5
2016-17	1.7	2.5	1.6	0.6	0.7	0.8	2.2	0.9	1.7
2017-18	1.5	2.3	1.6	0.8	0.6	1.0	2.2	0.2	1.6

Source: Commission calculation based on December estimated resident population from the ABS.

- 11 For capital assessments, the Commission would ideally use population growth rates across financial years, from 30 June to 30 June. In the 2015 Review, the Commission considered changing to financial year growth rates to better reflect the conceptual requirements for capital assessments. After consulting States, the Commission concluded that this shift would not materially improve the equalisation outcomes, in part because the GST distribution is based on a three year average. The Commission has retained this approach for the 2020 Review. For further discussion and States' views, see Attachment 1 of the 2015 Review.

Service populations

- 12 The Commission uses ERP data (that is, a person's place of usual residence) as the basis for estimates of the potential use of services. This means that tourists, itinerant workers, fly in fly out (FIFO) workers and mobile Indigenous populations, who are not always located at their place of usual residence, may affect service delivery requirements differently for different States and services. Conceptually, these effects could affect the relative use of services by different populations between and within States.

- 13 In the 2015 Review, the Commission considered whether it could identify, or measure, any such effects between and within States. However at that time, the ABS advised that no reliable method of estimating service populations had been developed nationally, or internationally, because service populations are not discrete or mutually exclusive. States have not been able to provide data on how different service populations affect State service provision requirements and State budgets. For the 2020 Review, the Commission has retained ERP as the measure of all populations.

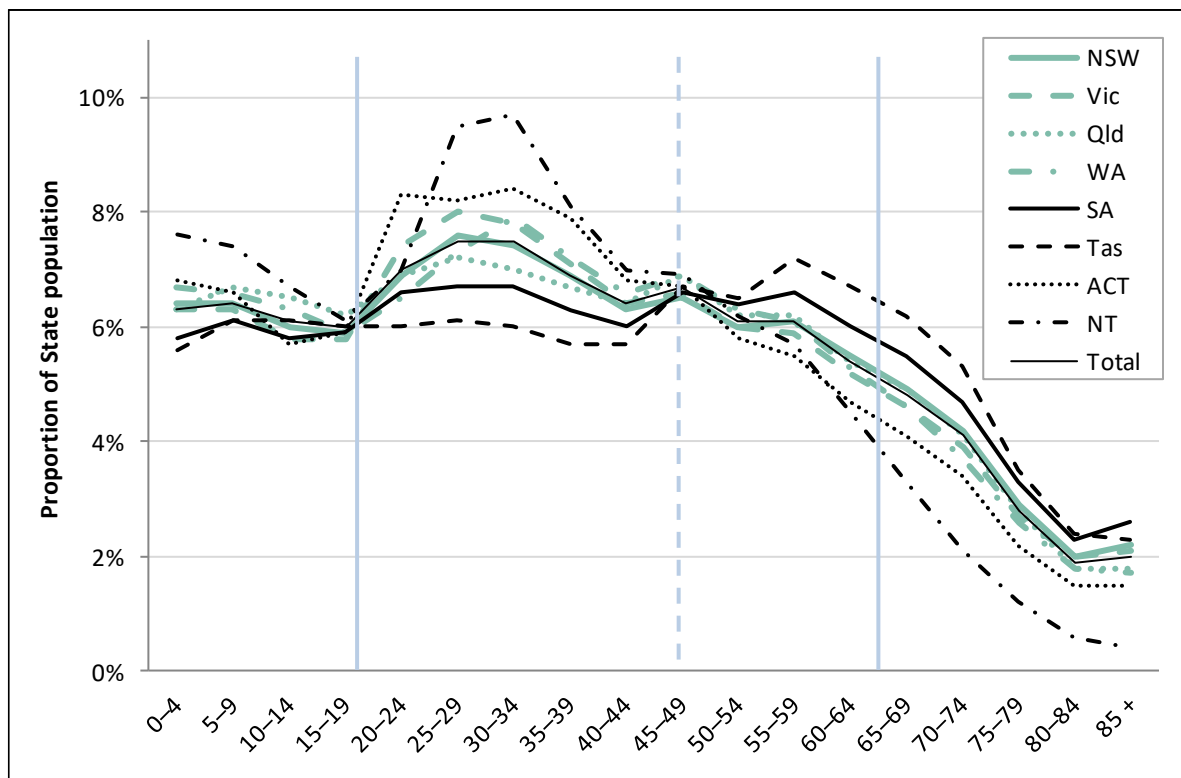
POPULATION CHARACTERISTICS USED IN ASSESSMENTS

- 14 The main population characteristics used in the assessments are Indigenous status, age, remoteness and socio-economic status. The main way in which these attributes affect the assessments is where States have different shares of these population groups. In selecting classifications, it is more important to consider how State populations differ, because differences in use rates only become relevant when State populations differ (for example, high Indigenous use rates would be irrelevant if all States had the same share of Indigenous populations).
- 15 The Commission uses a common structure for the classification of population characteristics for all expense categories. Having a common structure, with fewer unique classifications for these characteristics, reduces the size of the datasets required, makes for simpler assessments and reduces the risk of errors. It also enhances the comparative analysis that can be undertaken between expense categories. However, where service use rates do differ between States, it may be material to use different levels of detail within the common structure.

Age

- 16 The Commission aims to have common classification structures for the various assessments. This is best demonstrated with age, but is valid in other classifications. As the primary focus is on the difference in the distribution of populations between States, the Commission has been guided in selecting common structures by the patterns in Figure 1. This shows that Tasmania and South Australia have below average shares of 15-44 year olds, above average shares of 45-64 year olds and above average shares of 65+ year olds. In contrast, the Northern Territory and the ACT have substantially above average shares of 15-44 year olds and a share of 65+ year olds that is well below the national average.

Figure 1 Age structure of State populations, June 2018



Source: ABS, June 2018, *Australian Demographic Statistics*, cat. no. 3101.0.

- 17 In the 2020 Review, the major age groups used are 0-14, 15-64 and 65+ years. This structure is used in a range of social and economic statistics, and has been generally adopted in the Commission’s assessments. Within these major groups, further disaggregation has been applied where there is a conceptual case and it has been material to do so for different expense categories.
- 18 It is material to further disaggregate the 65+ age group in the Health assessment. As the population is ageing, the Commission also investigated if it would be material to split the 75+ age group into separate 75-84 and 85+ groupings, but found that splitting the 75+ age group would be immaterial. For the Justice assessment, the 15-44 age group is disaggregated. For the Post-secondary education assessment, the working age (15-64 years) population is used. The relevant attachments provide further details.
- 19 Table 3 shows the details of State estimated resident populations for December 2017 by major age groups.

Table 3 Estimated resident population by age and State, December 2017

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	'000	'000	'000	'000	'000	'000	'000	'000	'000
0 - 14 years	1 479	1 178	974	504	307	94	79	54	4 668
15 - 64 years	5 183	4 240	3 243	1 719	1 109	330	285	175	16 284
65+ years	1 260	968	747	361	312	101	52	18	3 818
Total	7 921	6 386	4 964	2 584	1 728	525	416	247	24 770
	%	%	%	%	%	%	%	%	%
0 - 14 years	31.7	25.2	20.9	10.8	6.6	2.0	1.7	1.2	100.0
15 - 64 years	31.8	26.0	19.9	10.6	6.8	2.0	1.8	1.1	100.0
65+ years	33.0	25.3	19.6	9.5	8.2	2.7	1.4	0.5	100.0
Total	32.0	25.8	20.0	10.4	7.0	2.1	1.7	1.0	100.0

Source: Commission calculation using ABS data.

Remoteness

- 20 Many of the assessments measure and disaggregate populations according to their degree of remoteness, which affects both the use of services, and the cost of delivering services. The indicator of remoteness should group like areas together and distinguish unlike areas. In the 2015 Review, the Commission changed its measure of remoteness from the State Accessibility and Remoteness Index of Australia (SARIA) to ABS remoteness areas, which are based on the Accessibility and Remoteness Index of Australia (ARIA+).²
- 21 For the 2020 Review, the Commission again considered the best measure of remoteness and concluded that the ABS remoteness areas are the best available measure of remoteness for its purposes. While ABS remoteness areas might not be perfect for the Commission’s purposes, there is no evidence of any specific biases in the ABS remoteness areas, or how this could be improved. States were consulted and their views are discussed in more detail in Attachment 25 — Geography.
- 22 Table 4 provides details of State estimated resident population for December 2017, split into five remoteness areas.

² ARIA+ is produced by the Hugo Centre for Migration and Population Research at the University of Adelaide.

Table 4 Estimated resident population by remoteness and State, December 2017

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Major cities	5 961	4 967	3 167	2 017	1 270	0	416	0	17 798
Inner regional	1 479	1 165	977	224	222	356	1	0	4 423
Outer regional	446	250	693	187	177	159	0	148	2 060
Remote	30	3	73	86	45	8	0	48	293
Very remote	6	0	55	70	14	3	0	50	197
Total	7 921	6 386	4 964	2 584	1 728	525	416	247	24 770
	%	%	%	%	%	%	%	%	%
Major cities	33.5	27.9	17.8	11.3	7.1	0.0	2.3	0.0	100.0
Inner regional	33.4	26.4	22.1	5.1	5.0	8.0	0.0	0.0	100.0
Outer regional	21.6	12.1	33.6	9.1	8.6	7.7	0.0	7.2	100.0
Remote	10.3	1.1	25.0	29.3	15.3	2.7	0.0	16.4	100.0
Very remote	3.0	0.0	27.8	35.5	7.0	1.3	0.0	25.5	100.0
Total	32.0	25.8	20.0	10.4	7.0	2.1	1.7	1.0	100.0

Note: Under the Australian Statistical Geography Standard (ASGS), Tasmania and the Northern Territory are considered to have no major cities, as neither have cities with a population of more than 250 000 people.

Source: ABS data request.

23 Category assessments use either the five remoteness areas, or an aggregation of these into groups, depending on the materiality of each disaggregation or the quality of the related administrative data. For example, in the Welfare assessment, it is not material to split remote and very remote categories for Indigenous child protection and family services, so these are grouped together.

Indigenous and socio-economic status

24 One of the attributes of the population that the Commission uses in the assessments is SES. In this review, the Commission has used separate measures of SES for Indigenous and non-Indigenous populations.

25 The Non-Indigenous Socio-Economic Index for Areas (NISEIFA) was developed for the Commission by the ABS. This index uses the same indicators as the Socio-Economic Indexes for Areas (SEIFA) Index of relative socio-economic disadvantage.³ The Commission uses NISEIFA to classify the non-Indigenous population into SES quintiles. The Indigenous Relative Socio-economic Outcome (IRSEO) index was developed at the Australian National University.⁴ The Commission uses this index to classify the Indigenous population into SES quintiles. These indexes are area-based measures.

³ ABS, *Census of Population and Housing: Socio-Economic Indexes for Areas*, Australia, cat. no. 2033.0.55.001.

⁴ IRSEO was developed by the Centre for Aboriginal Economic and Policy Research (see the [CAEPR website](http://caep.r.cass.anu.edu.au), <http://caep.r.cass.anu.edu.au>), at the Australian National University.

26 Table 5 and Table 6 provide details of State Indigenous and non-Indigenous ERP by socio-economic quintiles.

Table 5 Indigenous ERP by IRSEO quintile and State, December 2017

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Most disadvantaged	26	0	34	34	8	0	0	53	156
2nd most disadvantaged	53	8	62	29	16	1	0	0	169
Middle quintile	56	9	55	17	4	4	0	8	154
2nd least disadvantaged	77	13	29	19	10	19	0	8	174
Least disadvantaged	60	30	49	4	5	5	8	7	167
Total	273	60	229	103	43	29	8	76	821
	%	%	%	%	%	%	%	%	%
Most disadvantaged	16.9	0.0	21.9	22.0	5.4	0.0	0.0	33.8	100.0
2nd most disadvantaged	31.6	4.9	36.6	17.0	9.3	0.7	0.0	0.0	100.0
Middle quintile	36.4	6.1	35.4	10.9	2.9	2.9	0.0	5.4	100.0
2nd least disadvantaged	44.5	7.3	16.6	10.9	5.5	10.9	0.0	4.3	100.0
Least disadvantaged	35.9	17.7	29.2	2.5	3.1	2.9	4.7	4.0	100.0
Total	33.3	7.3	27.8	12.5	5.3	3.6	1.0	9.2	100.0

Source: Commission calculation using unpublished ABS data and the IRSEO index.

Table 6 Non-Indigenous ERP by NISEIFA quintile and State, December 2017

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Most disadvantaged	1 661	1 182	945	318	462	170	8	5	4 751
2nd most disadvantaged	1 509	1 187	1 032	477	412	122	24	17	4 778
Middle quintile	1 326	1 336	1 018	569	336	102	59	43	4 789
2nd least disadvantaged	1 334	1 392	978	591	288	62	107	52	4 805
Least disadvantaged	1 817	1 230	763	525	187	39	210	54	4 825
Total	7 648	6 326	4 735	2 481	1 685	496	408	171	23 949
	%	%	%	%	%	%	%	%	%
Most disadvantaged	35.0	24.9	19.9	6.7	9.7	3.6	0.2	0.1	100.0
2nd most disadvantaged	31.6	24.8	21.6	10.0	8.6	2.6	0.5	0.3	100.0
Middle quintile	27.7	27.9	21.3	11.9	7.0	2.1	1.2	0.9	100.0
2nd least disadvantaged	27.8	29.0	20.3	12.3	6.0	1.3	2.2	1.1	100.0
Least disadvantaged	37.7	25.5	15.8	10.9	3.9	0.8	4.4	1.1	100.0
Total	31.9	26.4	19.8	10.4	7.0	2.1	1.7	0.7	100.0

Source: Commission calculation using unpublished ABS data and the NISEIFA index.

27 Some assessments do not use IRSEO and NISEIFA to classify the population. This occurs when the administrative data on the use and cost of services from States or third parties cannot be classified to IRSEO and NISEIFA quintiles. For example, the Medical Benefits Scheme (MBS) data, which are used in the Health assessment, are

only available by SEIFA. In addition, the Welfare assessment uses the ABS' Index of Household Advantage and Disadvantage (IHAD).

Urban centres/localities (UCLs)

- 28 In this review, UCLs have been used as the primary geographic measure in assessments that relate to urban form. However, in certain instances the Commission needs to make adjustments to better reflect what States do.
- Urban transport is often provided as an integrated network across closely neighbouring UCLs. Therefore, in the Transport category, all UCLs within a Significant Urban Area (SUA)⁵ are aggregated and treated as a single urban centre. The Commission considers that this generally better reflects how States deliver this service.
 - In the Services to communities category, the Commission considers that subsidies for electricity are provided in remote and very remote towns, with at least 50 people, and a density of at least 60 persons per square kilometre for non-UCLs. Because UCLs are usually not defined for towns of less than 200 people, the Commission has defined small urban areas using aggregations of mesh blocks⁶, using criteria similar to that used by the ABS to define urban areas.
- 29 These adjustments and the other category specific criteria relating to how UCLs are used in each category are discussed in the relevant chapters:
- Roads — Attachment 17
 - Transport — Attachment 18
 - Services to communities — Attachment 15.
- 30 Table 7 shows the differences between States in where their populations are located in terms of various UCL size cut-offs applied in different categories.

⁵ The Significant Urban Area (SUA) structure of the Australian Statistical Geography Standard represents significant towns and cities of 10 000 people or more. A single SUA can represent either a single Urban Centre or a cluster of related Urban Centres.

⁶ Mesh blocks are the smallest geographic region in the Australian Statistical Geography Standard and the smallest geographical unit for which Census data are available.

Table 7 Estimated resident population by urban centre/locality and State, December 2017

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Population in remote and very remote UCLs/localities	22	2	98	117	42	8	0	84	372
UCLs of 40 000+	5 920	5 047	3 717	2 043	1 203	262	415	130	18 739
UCLs within SUAs	7 349	5 950	4 517	2 411	1 581	424	415	212	22 859
	%	%	%	%	%	%	%	%	%
Population in remote and very remote UCLs/localities	5.9	0.6	26.4	31.4	11.2	2.0	0.0	22.5	100.0
UCLs of 40 000+	31.6	26.9	19.8	10.9	6.4	1.4	2.2	0.7	100.0
UCLs within SUAs	32.1	26.0	19.8	10.5	6.9	1.9	1.8	0.9	100.0

Source: Commission calculations based on unpublished ABS data.