Government of **Western Australia**
Department of **Treasury**

Our ref : 00165502
Enquiries : Michael Court
Telephone : 08 6551 2700

Mr John Spasojevic
Secretary
Commonwealth Grants Commission
86-88 Northbourne Ave
BRADDON ACT 2612

Dear Mr Spasojevic

WESTERN AUSTRALIA'S FEBRUARY 2014 SUBMISSION TO THE 2015 REVIEW

Please find attached Western Australia's submission to the Commonwealth Grants Commission's (CGC) 2015 Review.

I wish to offer my apologies for the lateness of the submission. Given the significant consequences for Western Australia's budget of the State's current and forecast GST share, our intention is to provide you with a document that clearly sets out Western Australia's position on the major issues and the rationale for these positions. Achieving this has taken longer than expected.

As a general point, Western Australia considers that present assessment methods are too complex and yet remain unreliable. As a result, the current methods do not advance the objectives of fiscal equalisation. Western Australia suggests that the CGC's terms of reference requirements can be best achieved by a focus on simple transparent assessments, with unreliability addressed through consistent and unbiased discounting.

We look forward to further consultation with the CGC as part of the 2015 Review. If you have any queries in relation to this submission, please contact Alex Scherini on 6551 2788 or at alex.scherini@treasury.wa.gov.au.

Yours sincerely

M. Barnes

Michael Barnes
ACTING UNDER TREASURER

19 February 2014

Enc.

Gordon Stephenson House, 140 William Street, Perth, Western Australia 6000
Locked Bag 11, Cloisters Square, Western Australia 6850
Telephone (08) 6551 2777 Facsimile (08) 6551 2500
www.treasury.wa.gov.au

Government of Western Australia
Department of Treasury

Western Australia's Submission to the

Commonwealth Grants Commission's 2015 Methodology Review

February 2014

Table of Contents

Executive Summary

This submission responds to the Discussion Papers circulated by the Commonwealth Grants Commission (CGC) in October 2013. These Discussion Papers (and the discussion of them with CGC staff in November 2013) have not changed in any significant way the views we put forward in our July 2013 submission.

At the broadest level, we are seeking a more efficient (and thereby more equitable in the long term) form of equalisation that does not provide disincentives for economic development, nor reduce the capacity to pursue economic development opportunities. This is consistent with the CGC's horizontal fiscal equalisation (HFE) principle.

Improving the efficiency and long-term equity of HFE requires the CGC to better reflect what States do to facilitate efficient economic development and to improve the policy neutrality of its methods. This is particularly relevant to the mining revenue assessment. To the extent that the revenue benefits from economic development are redistributed, the costs States face in facilitating that development must be recognised.

As noted in our July 2013 submission, the impact of the current implementation of HFE on national structural adjustment is particularly problematic and has been extremely evident in Western Australia. The stripping away of growth revenues by HFE has significantly limited the State's capacity to facilitate economic growth opportunities through provision of appropriate common user infrastructure and amenities.

This submission reiterates these themes, while responding to the issues raised in the Discussion Papers.

Implementing HFE

We agree with the CGC that its main task in HFE is to identify "innate differences (factors) among the States which would cause their fiscal capacities to diverge".[1] This requires it to look beyond the policy influenced outcomes that it observes.

[1] CGC 2013-05 *Equalisation Objectives and Supporting Principles*, page 3, paragraph 6.

We note that the four supporting principles are all important to achieving HFE, and undue weight should not be given to any one of them. In addition, as the supporting principles are high level and potentially capable of different interpretations, it is important that they be understood in the context of the HFE principle.

What States Do

This principle, as it applies to services, relates to the HFE requirement for States to have the capacity to provide services at the same standard. 'What States do' therefore needs to be interpreted in terms of the average range and quality of services that States provide in like circumstances (an output measure), rather than in terms of input measures such as State wage setting policies.[2]

With regard to revenues, we query the CGC's narrow 'legal incidence' interpretation of this principle. 'What States do' should in principle include the considerations that underlie States' legislation and regulations. These considerations are not directly observable, but should be taken into account where reasonably inferable (e.g. assessing land tax on the basis of capacity to pay rather than land values).

Policy Neutrality

Consistent with the objective of identifying innate differences among the States, we believe that the CGC needs to consider policy neutrality from a long-term perspective, and we are encouraged by the CGC's greater openness to considering this issue.

We also agree that the HFE assessments should have the dual objective of minimising the impact of individual States' policies on their GST shares, and creating the smallest incentives or disincentives impacting on State policy choice.[3]

---

[2] The output approach considers, for example, the quality of labour that a State-set wage can buy, and how States react to variations in the buying power of their wage rates (e.g. whether they accept the labour quality variations or seek to avoid such variations through flexibility in pay classifications).

[3] See CGC 2013-05 *Equalisation Objectives and Supporting Principles*, page 7, paragraph 28.

Improving the policy neutrality of the mining assessment should be a key aim. The current assessment approach threatens to reduce Western Australia's GST grant by more than 100% of royalties raised from its increased royalty rates on iron ore fines in the long-run. The assessment also redistributes roughly all but a population share of the royalty benefits from new mining developments, making these developments more susceptible to differences in government policies that seek to balance benefits from the projects against costs.

Practicality

This principle requires assessments to be based on sound and reliable data and methods, but provides no in-principle guidance on dealing with the pervasive problems of limitations in the range and quality of data; policy contamination of data; and inability to directly observe or understand many things that 'States do'.

While we agree that the CGC's 'tools' of discounting and materiality can be appropriate, they are not the only tools that are available, and are not being used in the right way. Specifically:

- discounting should be applied more consistently, to all forms of uncertainty (particularly in regards to policy contamination) and bias needs to be avoided. If some expenditure needs are discounted, conservatively assessed or not assessed, then related revenue assessments should also be discounted (for example, if mining related expenditure needs cannot be fully assessed, the mining revenue assessments should be discounted);
- materiality thresholds should not be used within the calculation of disability factors, nor to justify the aggregation of assessments with incompatible revenue bases[4] (particularly given the CGC's current 'legal incidence' approach);
- consideration should be given to eliminating the assessment of minor standard policy aspects of State taxes that have no obvious linkage to equity or efficiency (i.e. tax thresholds and progressive tax scales); and
- consideration should be given to broader-based economic incidence assessments of revenue capacity, including a global revenue capacity measure.

[4] Examples include the proposed aggregation of metropolitan levies with land tax, and of duties on workers' compensation premiums with duties on general insurance premiums.

Western Australia considers that present assessment methods are often too complex and yet remain unreliable. Meeting the CGC's terms of reference requirements can be best achieved by a focus on simple transparent assessments, with unreliability addressed through consistent and unbiased discounting.

We consider that the fundamental limitations on the practical achievement of HFE are a strong reason for moving to an EPC distribution of the GST in the long-term, with the Commonwealth directly providing any necessary supplementary assistance to States. We recognise that this is not within the scope of the CGC's terms of reference.

Contemporaneity

This principle is interpreted as justifying backcasting in selected circumstances. However, the resultant distortion of HFE (i.e. back years are not properly equalised) will affect State fiscal capacities in future years through carry-forward of unequalised capacity, so it is not clear in what sense this is "appropriate". In addition, there are often concerns about the reliability of application year data that is to be backcast into the data period. While this is not a priority issue, it is nevertheless symptomatic of the tendency for the HFE process to be unnecessarily complex.

General Comments on the Proposed Assessments

Mining Revenue and Mining Related Expenditure

Understandably, the *Proposed Assessments* Discussion Paper has taken a cautious approach on these assessments, providing only general comments and seeking State views on particular issues. However, at times the discussion appears overly negative, even to the extent of questioning the role of States in supporting their mining communities; or the appropriateness of adjusting tax bases for policy neutrality; or (most strangely) the importance of designing HFE to not distort the capacity of States to undertake necessary investment to facilitate efficient economic development and structural adjustment in Australia.

We consider that the specific proposals put forward in our July 2013 submission remain valid, and are supported by further arguments in this submission. We note specifically the following.

Mining Revenue

- The current high rate/low rate Mining Revenue assessment must be replaced as it can lead to anomalous and highly inefficient outcomes.
- We continue to support a discounted actual per capita assessment for Mining Revenue (or alternatively a discounted mineral-by-mineral assessment), but have recommended that the discount be a minimum of 33% (and up to 50%), reflecting the likelihood that the CGC will not be able to fully identify mining related expenditure needs and consistent with the need to keep GST impacts from royalty rate changes below two thirds.
- We consider that States have put differing effort into developing their mining industries, but that it would be too unreliable to make specific State adjustments. The appropriate approach, as used in other instances of unreliability, is to discount the State revenue bases (and this is reflected in our recommended discount).
- We don't believe that international tax/royalty regimes can provide any useful information for assessing State mining revenues.

Mining Related Expenditure

- We continue to support the proposals in our July 2013 submission for the assessment of currently unrecognised mining related expenditure needs, estimated at around $2 billion per annum for Western Australia. These proposals are in principle data driven, although with limited data we have had to make various assumptions. The CGC has the opportunity to gather data to improve the quantification.
- It is not clear that the Discussion Paper reflects an understanding of our argument on costs of in-advance provision of infrastructure (which are higher in high growth States), and it is at times suggested that this is either a policy matter or already covered by the CGC's existing infrastructure assessment. We have therefore re-explained our argument, and also (as the paper requested) provided a proposed 'historical' assessment method. In our view, this is an unavoidable cost that States can only seek to minimise (which we have assumed in our analysis) and is not covered by the existing infrastructure assessment.

New Proposals by the CGC Supported by Western Australia

Indigeneity

We welcome the CGC's efforts to measure Indigenous socio-economic status (SES) separately from the general population.

Infrastructure and Net Lending

We support the proposals to consider using Rawlinsons construction cost indexes, and to use asset values to weight asset stock disabilities, in the Infrastructure assessment. We also welcome the recognition that the Net Lending assessment is integral to the broader population growth disability and that the current 25% discount should be removed.

New Proposals by the CGC Requiring Reconsideration or Further Work

Interstate Wages

- The proposal to assess the base level of regional wages using capital city wage pressures is contrary to the fiscal equalisation principle, does not reflect the practical flexibility that States have to adjust effective regional wages through pay classifications, and is not supported by credible data analysis. We recommend that the CGC abandon the attempt to separately assess capital city and regional wage pressures.
- However, we are concerned that the current assessment of whole-of-State wage pressures (based on econometric analysis of survey data on private wages) understates our wage disability, and recommend more effort to validate the currently estimated private sector wage differentials.

Interstate Non-Wage Costs

- The CGC has not provided a clear argument for favouring Tasmania and the Northern Territory with an assessment of interstate non-wage costs, while ceasing such an assessment for other States. We consider that the evidence shows such an assessment to be material for Western Australia.

Regional Costs

- The proposed allowance for Western Australia's high remote area accommodation costs relies on survey data of private sector wages that does not reflect employer accommodation subsidies. These costs are best estimated directly.
- The proposal to rely solely on education data to derive regional cost indexes (i.e. excluding the police data) will result in a less representative assessment of these costs. The police data should continue to be used.

Health

- The proposed dismantling of the 'subtraction model' assessment of community health expenses in the 2010 Review is a major backward step to a method of assessment that previously proved to be highly subjective. No new data exists that is relevant to remedying this situation. We recommend that the CGC retain its current method, and consider extending it to cover admitted patient services.

Schools

- The proposal to use States' actual enrolments to measure student numbers in the non-compulsory years creates significant risk of policy contamination. We recommend the current approach be retained until enrolment data can be assured to be policy neutral.
- With respect to the terms of reference requirements in relation to the National Education Reform Agreement, we consider that for all practical purposes the CGC can use its normal fiscal equalisation principles, and make an adjustment in the unlikely event it is shown to be necessary.

Housing

- We recommend that the CGC not use an income indicator in its proposed assessment, as there is no assessment of cost of living issues. We are also concerned about the appropriateness of the proposed 'households' measure of public housing use, and possible anomalies in the assessment of rental income.

Areas to 'Bite the Bullet' and Assess EPC

There are a number of areas where Western Australia considers that further work is unlikely to produce dividends and an EPC assessment should be applied.

Physical Environment

- As was found in the 2004 Review, a physical environment factor assessment continues to face the problem of an unacceptably high level of subjectivity, due to the multiplicity of possible environmental factors and lack of good transparent data.

Public Transport

- There is no conceptual or quantitative evidence to support increasing per capita needs for larger population centres (such evidence as there is relates to smaller population centres). Analysis of Australian data seems fatally compromised by the lack of large cities in all States to establish a policy neutral standard. While we support the CGC's recognition that non-urban transport subsidies are influenced by dispersion, this simply adds support to the likely absence of material needs for an aggregated public transport assessment.

Stamp Duty on Transfers of Listed Shareholdings

- Given the low standard tax rate applied, it is unlikely that an assessment would be materially different from EPC, and it would be difficult to model the level of transactions in States without this duty.

Areas Where the CGC Has not Clearly Responded to Western Australian Concerns

In a number of areas, we consider that the *Proposed Assessments* Discussion Paper has overlooked, or not clearly responded to, significant arguments that we have put forward. We urge the CGC to properly consider these issues, to ensure that assessments are transparent and well based.

Land Tax

- We have proposed that land tax be assessed on a ‘capacity to pay’ basis (i.e. using household income) rather than using land values to better reflect ‘what States do’; and if the current assessment is retained a further 25% discount should be applied because land values are significantly affected by government policies.

Justice Services

- We have recommended that the 50% discount for community policing be discontinued, as it is based on a false presumption that this is not crime-driven. In this submission we have provided further analysis to show that (contrary to the CGC staff view) a discount is inconsistent with analysis of police staffing levels in each State, and inconsistent with evidence on community policing strategies and activities that highlight the importance of crime propensity as a driver of need.

Disability Services

- We have expressed major concerns about the appropriateness of using Commonwealth disability support pensioner numbers as the basis for assessing relative needs in this area, given the generally acknowledged concerns about the lack of transparency around eligibility for this pension (and which may also be affecting ABS survey data), and that States provide services to only a small proportion of these pensioners.

Disabilities for National Network Roads

- We believe that the CGC should cease assessing disabilities based on Commonwealth capital payments for national network roads, as the conceptual case for such disabilities has not been demonstrated.

Discounting of Commonwealth Payments

We do not support discounting of Commonwealth payments on the basis of "national significance" as that cannot be meaningfully defined (we would support a general discount to all State revenues, including Commonwealth payments).

Quality Assurance

As part of the quality assurance process, we recommend periodic external review to assess whether the CGC is appropriately achieving the HFE principle, particularly having regard to consistency of approach and data and method uncertainties.

1. Equalisation Objectives and Supporting Principles

Key Points

- We agree that HFE should address 'innate differences (factors) among the States'.
- We agree that the supporting principles are aspirational, that trade-offs are necessary and that judgement is needed 'to devise the best overall result consistent with the aim of achieving fiscal equalisation' (but that discounting the results overall is justified by the need for judgement).
- While understanding the CGC's desire to 'not set rules' for trade-offs, community support for HFE requires transparency, a consistency of approach and clear rationales for the approach taken.
- The supporting principles are high level and issues of interpretation will arise. In these cases, it is important to adhere to the principle of HFE rather than solely focussing on the CGC's supporting principles.

We agree with the CGC that its main task in HFE is to identify 'innate differences (factors) among the States'.[1] This requires it to look beyond the policy influenced outcomes that it observes.

We understand the CGC's intention to maintain the supporting principles from the 2010 Review. We agree that the supporting principles are aspirational, that trade-offs are necessary and that judgement is needed 'to devise the best overall result consistent with the aim of achieving fiscal equalisation' (but the CGC should recognise that the need for judgement demonstrates a degree of uncertainty, which justifies discounting the results overall).

[1] CGC 2013-05 *Equalisation Objectives and Supporting Principles*, page 3, paragraph 6.

We also understand the CGC's desire to 'not set rules' for trade-offs among the supporting principles. However, support for HFE requires transparency, a consistency of approach and clear rationales for the approach taken. In particular, the four principles are all important to achieving HFE, and undue weight should not be given to any one (as appears to have occurred with the lack of attention to the policy neutrality of the mining revenue assessment in the 2010 Review).

We note that the supporting principles are high level and issues of interpretation may arise. In these cases, consistency of approach and adherence to the HFE principle will be important. Here are some examples.

- For the wages assessment, the CGC staff propose that 'what States do' is match wages to capital city wage pressures and apply these wages to regional areas where wage pressures are lower. Setting aside the issues of whether this is a true reflection of 'what States do' or whether regional wage pressures are actually lower in many States, it raises the question of how to understand the principle of 'what States do' – is it to be understood in terms of the actual standard of the service (i.e. output) provided, or the inputs (e.g. wages) to that service? The HFE principle requires the former interpretation.

- The principle of 'delivering relativities that are appropriate to the application year' is interpreted as justifying backcasting in selected circumstances. However, the resultant distortion of HFE (i.e. back years are not properly equalised) will affect State fiscal capacities in future years through carry-forward of unequalised capacity, so it is not clear in what sense this is 'appropriate'.

- The principle of 'practicality' requires assessments to be based on sound and reliable data and methods, but there is no guidance on what to do when this is not achievable, other than that 'the equalisation outcome may not be improved by including factors when sufficient data are not available to measure their effects or where effects are small.' This is further considered in the chapter on *Implementation and Methodological Issues*.

2. Implementation and Methodological Issues

Key Points

- We support the retention of the direct assessment of capital.
- We believe that, if the CGC retains a legal incidence approach to assessing revenues, then it should not assess revenues raised by only some States with other 'similar' revenues (unless the revenue bases are identical).
- Policy neutrality is a fundamental principle, and should not be downplayed.
- Materiality thresholds should not be used mechanically, should not be used within the calculation of disability factors, and should not be applied to individual Commonwealth payments. Ensuring transparency in the use of materiality thresholds is important.
- The current use of discounts is highly selective and risks a biased HFE outcome. The CGC needs to develop a conservatism principle to underpin a systematic and unbiased use of discounting.
- We are generally opposed to backcasting, and do not believe that Commonwealth Budget forecasts are sufficiently reliable to use as a basis for backcasting.
- We recommend that the CGC seriously consider adopting a global revenue bases measure, using adjusted gross State product (GSP), as described in our July 2013 submission.
  - This would give broadly similar results to the existing revenue assessments.
  - It is the only way to avoid significant policy impacts in the mining revenue assessment.
  - It would be far simpler than the existing assessments.
- We believe that the CGC should measure tax raising capacity using the economic incidence of taxes. We recommend that the CGC not assess exemption thresholds and progressive tax scales.
- We support the CGC's approach to assessing Commonwealth payments based on the proposed guidelines. There should be no selective discounting, although a general discount across all revenues including Commonwealth payments would be appropriate.

This chapter addresses the *Implementation and Methodological Issues* Discussion Paper.[1] It follows the order within that Discussion Paper.

Approach to Capital Assessments

Consistent with our July 2013 submission to the 2015 Review, we consider the Discussion Paper proposal to retain the direct assessment of capital (rather than changing to an opportunity cost assessment) to be reasonable.[2] There is controversy over the measurement of public sector opportunity costs, with some economists of the view that public sector borrowing rates understate these costs.

What States Do

The Discussion Paper proposes that every form of revenue should be seen as part of average policy.[3] We see this as theoretically appropriate, but are concerned about the implementation of this.

The Discussion Paper suggests that if the revenue is 'sufficiently similar to another' revenue, then it will be assessed as part of that other revenue. It also discusses materiality thresholds to determine whether assessing the revenue is material (if not, it would be assessed EPC). At the November 2013 telepresence meetings, CGC staff clarified that materiality testing would be used in comparing the three alternatives of:

- assess as part of another revenue;
- assess separately; or
- assess EPC.

[1] CGC 2013-06-S *Implementation and Methodological Issues*.

[2] CGC 2013-06-S *Implementation and Methodological Issues*, page 6.

[3] CGC 2013-06-S *Implementation and Methodological Issues*, page 8.

The CGC currently uses a legal incidence approach to measuring revenue raising capacity.

- If the CGC continues to use legal incidence, then it would only be appropriate to assess a revenue as part of another revenue if they were levied on identical revenue bases (bearing in mind that the CGC currently highly finesses revenue bases, such as dissecting them by progressive value ranges). Otherwise, it would be necessary to assess the revenue separately, but only if the result were materially different from EPC.
- If the CGC moves to broader indicators of revenue raising capacity, then it could be appropriate to assess some revenues as part of other broadly similar revenues.

Policy Neutrality

The *Implementation and Methodological Issues* Discussion Paper tends to downplay the importance of the policy neutrality supporting principle,[4] contrary to the *Equalisation Objectives and Supporting Principles* Commission Position Paper, which states that the assessments should reflect innate differences between States.[5]

This is an important principle, which should have an impact on the CGC's decisions (otherwise, the principle would be of little point). It is different from what States do, and may be used to select between different approaches to 'what States do'.

Without genuine policy neutrality we have the problem that, as noted in a recent OECD publication, 'Equalisation may in fact be self-defeating in that it slows down regional convergence ... the more generous equalisation is, the less incentive there is for poor regions to catch up or for households and firms to migrate to more prosperous jurisdictions. As a result, disparities widen rather than narrow.'[6]

The problem with lack of policy neutrality is that its effects grow over the years and decades, until it becomes a major productivity problem for the nation.

---

4 CGC 2013-06-S *Implementation and Methodological Issues*, pages 10-11.

5 CGC 2013-05 *Equalisation Objectives and Supporting Principles*. page 3, paragraph 6.

6 See *Fiscal Federalism 2014: Making Decentralisation Work*, OECD Publishing, 2013, page 111.

Improving the policy neutrality of the Mining Revenue assessment will be particularly important, in terms of the sensitivity of the assessment to changes in both State revenue bases and royalty rates.

Materiality

In our July 2013 submission to the 2015 Review, we argued that materiality thresholds should not be implemented in the context of simply removing 'moving parts' in existing assessments to achieve superficial simplification.

- We are concerned with the CGC's use of materiality thresholds to eliminate sub-components of particular disability assessments. For example, for the public hospitals category the CGC propose to disaggregate age into five groups rather than the existing seven on the basis of materiality grounds. This is of concern because;
  - there is a conceptual case to keep the groups separate, as the use and cost patterns differ significantly between the groups, something the CGC acknowledges itself;
  - there is a loss of transparency, as we have to take the CGC on trust, and cannot see the actual impact of reducing the number of groups;
  - there is a further loss of transparency, as we (and probably the CGC) do not know whether the boundaries between the reduced number of groups are optimally chosen to represent the 'best estimate' disability obtained by using a detailed breakdown of age groups; and
  - there are no gains in the form of simplification to be made, and in fact there is a loss of simplicity as the groups have to be retested over time for changes in materiality.
- Our view is that materiality should not be used in a manner as described above, and that disabilities should be calculated as accurately as possible, based on conceptual grounds and available data. The CGC can then assess whether these accurately calculated disabilities are material.
- In addition, in the event that the CGC continues with its legal incidence approach, it should not amalgamate non-material revenue assessments with other material revenue assessments that have a different revenue base.

In relation to Commonwealth payments, materiality thresholds should not be applied to individual payments.

- Assessing Commonwealth payments is simple as the data for these payments are readily available and transparent.
- As noted by the CGC, a large number of small payments would fall under a small materiality threshold. However, the sum of these payments could be biased towards particular States.
  - If a materiality threshold is to be used, it should be applied at the aggregate level of all payments rather than on the individual payments.
  - This would be consistent with applying materiality to the total impact of a disability factor, rather than its impact in each category.

Discounting

As highlighted in our July 2013 submission, we are concerned that the application of discounts is selective and risks a biased HFE outcome. Our concerns with the current approach with discounting include:

- the focus on reliability of each component of HFE rather than the reliability of the aggregate HFE outcome;
- the potential bias introduced into HFE by discounting or not assessing some needs, while fully assessing others that may be correlated with the discounted needs;
- the uncertainty and lack of consistency over 'onus of proof' – whether discounting should occur when the lack of fitness of purpose of data can be demonstrated, or when the fitness of purpose of data cannot be demonstrated (in the latter case, mining revenue bases and welfare assessments based on Commonwealth beneficiary assessments are not currently discounted; but land tax, wages and regional costs are currently discounted);
- discounting being frequently undertaken due to perceived data limitations, but not generally applied due to conceptual and policy neutrality limitations. For example, the revenue assessments are presumed reliable, as there is generally accurate data on the size of the revenue bases. However, these revenue bases are policy influenced, so even if they could be measured precisely, the results would still not be an accurate measure of what States could collect under average policy; and
- the high level of judgement, and lack of transparency and consistency in the quantum of discounting.

In November 2013 telepresence meetings and supporting documentation,[7] CGC staff argued that discounting towards EPC is the CGC's approach to dealing with uncertainty, as it is seen as 'safe'. However, the *Equalisation Objectives and Supporting Principles* Commission Position Paper[8] does not provide any underlying principle or conceptual foundation to support discounting. We think the CGC's current approach is 'unsafe' for all the reasons given above.

We believe that a conservatism principle is warranted, but that it needs to go beyond the current practice of discounting selected individual assessments.

The alternatives include:

- more consistent discounting at the individual assessment level to cover all forms of uncertainty, and discounting the more certain assessments where there is likely to be a relationship with discounted assessments; or
- discount the final relativities (rather than individual assessments) to cover the aggregate of all uncertainties. The global discount could be worked out by aggregating the total dollar impact of discounts that would be applied to individual assessments (under the previous bullet point) and then converting this to a global discount to the relativities.

Contemporaneity

We continue to be of the view that only lagged equalisation is actually achievable. Under this view, the only changes that would ever be backcast would be changes to the size of the GST pool (e.g. if the GST base were broadened).

If the CGC is to continue backcasting changes, it should only do so where the change in the application year is known with some certainty. Using Commonwealth Budget estimates for this purpose would often not be sufficiently reliable.

We agree with the Discussion Paper proposal[9] that the CGC continue to use the most recent data available for all data years. We believe this should be done to more accurately reflect States' circumstances in the application year.

---

7 *State Issues not Covered in Telepresence*, November 2013, pages 28-29, paragraph 180.

8 CGC 2013-05 *Equalisation Objectives and Supporting Principles*.

9 CGC 2013-06-S *Implementation and Methodological Issues*, page 23.

Global Revenue Assessment

In our July 2013 submission to the 2015 Review, we argued for a global revenue assessment of State taxes and mining revenues, using an adjusted measure of GSP.

- This would give broadly similar results to the existing revenue assessments.
  - We acknowledge that the differences are material, but we believe that the existing revenue assessments are quite unreliable, particularly as some of the revenue bases are quite policy affected.
- It is the only way to avoid significant policy impacts in the mining revenue assessment.
- It would be far simpler than the existing assessments.

Following are concerns raised by the Discussion Paper[10] on a global revenue assessment, and our responses.

Equalisation is about the capacity of States to raise revenues rather than the capacity of communities to pay revenues.

- We do not see how these two concepts differ in practice.
  - States cannot levy revenues if communities do not have the capacity to pay those revenues.
  - If States levy revenues at differing proportions of the capacity of communities to pay those revenues, then the States are making different revenue raising effort.

States cannot tax global revenues in reality.

- States are ultimately raising revenue from the global capacity of communities to pay. They use various specific taxes, and each State chooses its own mix of these taxes, by using different tax rates, to best capture community capacity to pay.

[10] CGC 2013-06-S *Implementation and Methodological Issues*, page 24.

  - While States could potentially have a wider range of taxes, it is not clear that this would make much practical difference in ability to access community capacity to pay, particularly as different parts of the economy are closely linked through economic transactions.

Revenue raising disabilities differ for different taxes.

- The GST grant impact reflects the aggregate net disability.

A global revenue base does not reflect differences in industry structure, income distribution, wealth or ability to export tax bases

- It is true that a global revenue base will be a rough measure. However, given the uncertainties in the existing revenue assessments (including not fully addressing policy influences, and focussing on legal incidence rather than State underlying aims which may be similar across States but require different 'legal incidence' implementation due to different circumstances in each State), we do not believe that in practice equalisation can be precise. Therefore, the rough assessment of a global revenue base may be as good as a more detailed, but still ultimately flawed, revenue by revenue assessment.

- Moreover, the pervasive linkages in State economies would reduce the significance of these factors.

States are not able to overcome the legal and other practical constraints on their taxing powers.

- State Governments are free to change laws. They can change tax rates, redefine tax bases, and access the underlying revenue bases in various ways. While there are some constitutional constraints, our proposed adjusted GSP measure addressed these.

In summary, we believe that the CGC should seriously consider a global revenue assessment.

Broad Indicator Assessments

The Discussion Paper[11] proposes that the CGC continue to use a legal incidence approach to measuring revenue bases, including recognising thresholds and progressive scales.

There are two issues involved:

- legal incidence versus economic incidence; and
- recognition of thresholds and progressive scales.

Legal incidence versus economic incidence

Taxes are frequently passed on by the legal payer to a third party.

For example, as noted in the *Land Tax* chapter, landlords pass land tax on to their tenants, and businesses pass land tax on to their customers.

- In each of these cases, the burden of the tax falls on the third party. Therefore, the taxing effort should be measured relative to the capacity of the third party to pay the tax. Capacity to pay issues are discussed further in the above *Global Revenue Assessment* section.
- Furthermore, even if the landholders cannot pass on the land tax, they do not pay the tax by selling part of their land. Rather, they pay the land tax from their income. Therefore, their capacity to pay need not be related to the value of the land that they hold.

Therefore, we believe that the CGC should be using economic incidence to measure revenue raising capacity.

Thresholds and progressive scales

To the extent that the economic incidence of a tax differs from the legal incidence, then the legal tax base thresholds and progressivity are unlikely to meaningfully reflect differing tax capacity, so should be ignored.

In addition, as discussed in the *Payroll Tax* chapter of this submission, assessing thresholds:

- adds complexity;

[11] CGC 2013-06-S *Implementation and Methodological Issues*, pages 25-26.

- conflicts with the general principle of abstracting from policy choices;
- potentially promotes inefficiency in the design of tax regimes;
- introduces grant design inefficiencies; and
- requires a more complex approach than the current CGC methods in order to be theoretically correct.

Commonwealth Payments

We agree that conceptually all payments which impact State finances should be included, and support the CGC continuing to assess payments based on the guidelines proposed.

We see no case for selective discounting of, say, 'national interest' payments, which is likely to increase inefficiency and inequity, as discussed in our July 2013 submission.

We would support a general discount across all revenues, including Commonwealth payments.

3. Payroll Tax

Key Points

- We agree with New South Wales' recommendation that the payroll tax threshold adjustment be removed. This adjustment:
  - adds to the complexity of the assessment process;
  - conflicts with the general principle of abstracting from policy choices;
  - potentially promotes inefficiency in the design of payroll tax regimes;
  - introduces grant design inefficiencies; and
  - is only an approximation to the payroll tax threshold standard policy.
- There are issues with how the payroll tax base is measured with regards to offshore and FIFO workers which require investigation by the CGC.

Tax Free Threshold

As we argued in our January 2009 submission to the 2010 Review, there are three primary reasons to remove the payroll tax threshold adjustment.

- Simplicity – The ABS produces reliable and objective estimates of the payroll tax base on a regular basis (the Compensation of Employees (CoE) as part of the annual State accounts). Including a threshold adjustment adds unnecessary complexity to the process.
- Large policy variations – Although it is average policy to exempt part of the payroll tax base, the size of the exemption threshold varies widely from $550,000 in Victoria to $1,750,000 in the ACT.
- Efficiency – The existence of a payroll tax exemption threshold weakens the integrity of the revenue base and necessitates higher rates on those who do pay the tax. The adjustment may be seen as validating the retention of an exemption threshold, and hence potentially promotes inefficiency in payroll tax design.

Assessing a payroll tax threshold also introduces grant design inefficiency, as a State with a relatively low proportion of its wages above the threshold can raise both its threshold and tax rate in such a way as to be revenue neutral in terms of the amount of payroll tax collected but, at the same time, increase its GST grant share through potentially both the increase in its threshold and the increase in its tax rate.

Furthermore, the use of an average threshold is only an approximation to the standard policy on the payroll tax threshold. A more accurate calculation (using the 2012-13 data year as an example) would be as follows.

- For payrolls below $550,000 (the lowest threshold, which is applied by Victoria), apply a standard tax rate of zero.
- For payrolls between $550,000 and $600,000 (the next lowest threshold, applied by South Australia), the standard tax rate would be calculated by weighting Victoria's 4.9% tax rate by Victoria's share of the marginal revenue base within that value range.
- For payrolls between $600,000 and $689,000 (the next lowest threshold, applied by New South Wales), the standard tax rate would be calculated by weighting Victoria's 4.9% tax rate and South Australia's 4.95% tax rate by their shares of the marginal revenue base within that value range.
- Continue this process. While the ACT has the highest threshold ($1.75 million), further 'intermediate' value ranges would be needed to pick up the sliding payroll tax rates in Queensland and the Northern Territory. A final value range would be used to assess the component of payrolls above $7.5 million.

When judging whether or not a threshold assessment is material, the CGC should in theory compare this approach to an equal per capita (EPC) assessment (we recognise this would be impractical).

Offshore and FIFO Workers

There is the potential for Western Australia's payroll tax base to be assessed as larger than it actually is due to how offshore and FIFO workers are measured by the ABS.

Currently the ABS' CoE data is taken from a survey, relying on businesses to correctly assess which State their wages are paid in. The issue with offshore and FIFO workers is that many of them perform work in Commonwealth waters and/or have their primary residence in another jurisdiction. As the work is performed in Western Australia (or off the coast), the employer would typically complete the survey such that it assigns compensation in Western Australia.

However, nexus arrangements applied by State revenue offices mean that if a person performs work in two or more jurisdictions, or offshore, their payroll tax liability lies in the State in which they live. This means that payroll tax is only collected on a non-resident if all of the work is performed onshore in the State.

This can lead to instances where an employee who performs work off the coast of Western Australia on a FIFO arrangement, but normally resides in New South Wales, can be assessed as contributing to Western Australia's payroll tax base, but have the payroll tax on their wages paid in New South Wales, increasing the size of Western Australia's payroll tax base without any associated revenue.

The ABS' CoE data may require an adjustment to identify the true size of the payroll tax revenue base. We recommend the CGC investigate this issue further.

4. Land Tax

Key Points

- Land values do not provide a good indicator of capacity to pay, whereas the relationship between land tax and economic activity is strong and stable.
  - This is recognised in what States do, by how they set land tax rates.
  - We propose using household income as the land tax capacity indicator.
- If the use of land values is retained, the CGC should continue to use data from State revenue offices, the current 25% discount that is in place to ameliorate data problems should be retained, and a further 25% discount should be applied because land values are significantly affected by government policies.
- Metropolitan levies should continue to be assessed EPC, as it is unlikely that a differential assessment would be material, and it is inappropriate to amalgamate these with the land tax assessment.

Land Tax Revenue Base

The Discussion Paper[1] misunderstands our position in our July 2013 submission to the 2015 Review, stating that we argued for assessing land tax by a global revenue assessment.[2]

The main arguments made in our July 2013 submission still stand, primarily:

- land values are a poor indicator of the underlying land tax base - land tax collections are more reflective of the populace's ability to pay land tax, with household income a suitable gauge of this ability; and
- land values are highly policy influenced by government actions.

1 CGC 2013-07-S *Proposed Assessments*, page 4, paragraph 9.

2 In the context of mining revenue, we argued for a global revenue assessment, which would incidentally address our concerns with the land tax assessment. However, our arguments about the land tax assessment assumed that there would continue to be a separate land tax assessment, and related to how that assessment should be fixed.

Use of household income

We do not agree with the statement in the *Implementation and Methodological Issues* Discussion Paper[3] that the 'capacity of communities to pay taxes' is different from the 'capacity of States to raise taxes'. The ability to collect a tax is intrinsically linked to the taxpayers' ability to pay it. Focussing on the legal incidence of a tax can also be misleading, as the economic incidence of a tax determines who will bear the burden.

For example, focussing on the legal incidence of land tax ignores the fact that property investors may pass the cost of land taxes onto their tenants, pushing the incidence from the land owners to those using the land. Likewise, businesses may pass the cost of land taxes onto their customers.

Furthermore, even if the landholders cannot pass on the land tax, they do not pay the tax by selling part of their land or taking out a mortgage. Rather, they pay the land tax from their income. Therefore, their capacity to pay need not be related to the value of the land that they hold.

This is also reflected in what States do – when land values rise faster than the capacity to pay, States reduce their land tax rates. States even have capping arrangements and moving averages to effectively reduce their land tax rates automatically.

- States with higher per capita land values have lower tax rates.[4] The CGC should recognise this in its assessments, just as it recognises that States with larger cities use rail for public transport.

Hence household income is considered a superior method of measuring how land tax is levied, with a strong and stable correlation between household income and States' land tax collections[5]. Household income data is also free of the data concerns that plague the current capacity assessment, in that it is collected by a neutral external party (the ABS), but does not need any adjustments to the data.

---

[3] *Implementation and Methodological Issues* Staff Discussion Paper CGC 2013-06-S, p. 24

[4] CGC staff have suggested that there may be other reasons for this, but have not identified why these reasons might result in the observed pattern.

[5] For further detail, refer to Chapter 6 of Western Australia's July 2013 submission to the CGC's 2015 Methodology Review.

Policy influences on land values

If the CGC continues to use land values to assess land tax capacity, then we support it:

- continuing to use data from State revenue offices (SROs); and
- continuing the current 25% discount due to its concerns about the comparability of the data across States.

However, even if land values could be measured entirely comparably, they would not be a policy neutral measure because State governments influence land values through measures such as restrictive zoning, land releases, and changes to building codes. As this introduces considerable error into the measurement of the revenue base, we recommend adding an additional 25% discount to the current 25% data quality discount (to a total of 50%).

Metropolitan Levies

If the CGC insists upon a legal incidence basis, then it should not simply pro rata metropolitan levies across all land values used in the land tax assessment, as not all land in the CGC's existing assessment is metropolitan. The Victorian levy also covers metropolitan properties that are not subject to land tax, and is based on the full value (both house and land) of the property.

If metropolitan levies are assessed separately, then it is unlikely that they would cross the materiality threshold of $30 per person. In the *Proposed Assessments* Discussion Paper[6], the CGC estimates the revenue raised from these levies at $13 per capita. If a differential assessment is not materially different from an EPC assessment, then an EPC assessment should be made.

[6] *Proposed Assessments* Staff Discussion Paper CGC 2013-07-S, p. 6

5. Conveyance Duty

Key Points

- We recommend the CGC continue to adjust for differences in the scope of transactions subject to duty, including in relation to:
  - ‘off the plan’ purchases;
  - landholder duty; and
  - duty on non-real business assets.
- Duty on listed landholdings should be assessed EPC as it is unlikely the assessment would be materially different from EPC, and it would be difficult to model the level of transactions in States without this duty.
- Duty on non-real business assets should only be assessed differentially if it is materially different from EPC, reflecting the level of judgement needed in this assessment.
- There appears to be a significant degree of subjectivity in the conveyance duty assessment. The 2010 Review methods for adjusting for differences in scope appear rough and inconsistent in application. In some cases revenue bases are increased while in others they are decreased in response to differences in the scope of taxation.

Adjustments for Differences in Scope

The Discussion Paper[1] seeks States’ views on what data adjustments should be made for differences across States in the type of property subject to conveyance duty (such as in relation to ‘off the plan’ purchases, transfers of entities that own land, and non-real property).

In Western Australia, transfer (conveyance) duty is levied on ‘off the plan’ purchases. Transfer duty is a transaction tax and Western Australia accordingly applies duty to the value of the transaction at the time it occurs. This is ‘what (most) States do’. Consequently, in line with the CGC’s supporting principles, it is appropriate to adjust the revenue base for States (such as Victoria) that do not levy duty on the full value of ‘off the plan’ purchases.

1 CGC 2013-07-S *Proposed Assessments*, page 8.

Since 2008-09 Western Australia has levied landholder duty on indirect acquisitions of land. This duty applies when an entity acquires an interest of 50% or more in an unlisted corporation or unit trust scheme, or 90% or more in a listed corporation or unit trust scheme, and that corporation or unit trust scheme has an entitlement to Western Australian land valued at $2 million or more.

All jurisdictions except Tasmania have similarly introduced landholder duty in recent years but, even in jurisdictions that now levy landholder duty, it was not levied in all of the data years in question. Consequently, States' revenue bases should be adjusted for differences in the application of landholder duty.

An adjustment should also be made for differences in the application of transfer duty to transfers of non-real business assets (such as intellectual property and goodwill). Like most other States, Western Australia has deferred the abolition of duty on non-real business assets (which had been legislated to be abolished from 1 July 2013) until budget circumstances allow.

Assessment of Conveyance Duty Adjustments

Although, as discussed above, States' revenue bases should be adjusted for differences in various policies, including the levying of duty on listed landholdings and non-real business assets, the CGC must still decide whether or not to make a differential assessment for these transactions.

It is questionable if an assessment for listed landholder duty would be material as most jurisdictions levy landholder duty at a concessional rate of 10% of the transfer duty rate for listed (but not unlisted) corporations or unit trust schemes.[2] Also, it is unclear how the CGC could model these irregular transactions in States without listed landholder duty.

Therefore, we believe the CGC should assess listed landholder duty EPC.

Given the judgements that are needed, the CGC should also only assess duty on non-real business assets if it is material.

[2] Western Australia and the Northern Territory levy landholder duty at the general rate of transfer duty for both listed and unlisted corporations or unit trust schemes.

Inconsistency in the Assessment

Of note, the methods adopted in the 2010 Review appear inconsistent in how adjustments are made to States' revenue bases. In some cases, a State's revenue base is increased when it does not levy the tax, while in other cases when a State does not levy the tax, the revenue bases of other States are decreased.

For example, in the 2010 Review the CGC:

- increased the revenue base of Victoria because it did not levy duty on 'off the plan' adjustments;
- increased the revenue bases of Victoria and Tasmania because they did not levy landholder duty;
- decreased the revenue bases of Queensland, Western Australia and Victoria because they levied duty on a wider range of unit trusts than other States; and
- decreased the revenue bases of New South Wales, Queensland, Western Australia, South Australia and the Northern Territory because they levied duty on non-real business property transactions.

Overall, there appears to be a significant element of subjectivity in the conveyance duty assessment, reflecting these inconsistent approaches and the rough nature of the quantification of the adjustments.

6. Insurance Tax

Key Points

- Workers' compensation insurance duty should be assessed EPC, as it is unlikely that a differential assessment would be material.
- If a legal incidence approach to assessing taxes is retained then it would be inappropriate to include workers' compensation insurance premiums with other insurance premiums.

Workers' Compensation Insurance Duty

If workers' compensation insurance duties are assessed separately, it is unlikely that they would cross the materiality threshold of $30 per person. Only two States levy the duty, South Australia and Queensland. Although duty collections data is not published we estimate that, based on the size of the workers' compensation market in those two States, the amount of money raised in Australia is around $150 million, which is less than $7 per capita. If a differential assessment is not materially different from an EPC assessment, then an EPC assessment should be made.

Under a legal incidence approach to assessing taxes, including workers' compensation premiums in the insurance taxes revenue base would not be appropriate as it would deliver an assessment inconsistent with legal incidence principles. The average rate of duty on insurance on workers compensation premiums is very low (reflecting that only two States levy the duty), but in the assessments the workers compensation premiums would have a standard tax rate applied that would be driven by the general insurance tax rates. This would not reflect 'what States do'.

7. Mining Revenue

Key Points

- The current high rate/low rate Mining Revenue assessment must be replaced as it can lead to anomalous and highly inefficient outcomes.
- As stated in our July 2013 submission, a significant discount is essential to recognise the sensitivity of assessment outcomes to States' industry policies and royalty rates; the large degree of judgement required by the CGC; the inability to reliably assess the additional expenditures incurred by States with large mining industries; and intergenerational risks from future changes to HFE.
  - We now consider that the discount should be 33% to 50% reflecting the likelihood that the CGC will not be able to full identify mining related expenditure needs and consistent with the desire to keep GST impacts from royalty rate changes below two thirds.
- While there is an inherent trade-off between policy neutrality and accurately assessing royalty raising capacity, we consider actual per capita (APC) and mineral by mineral assessments (with an appropriate discount) provide the most appropriate equalisation outcomes.
  - An APC assessment is preferred, as it is less data intensive, and takes account of differing long-run profitability and other circumstances of the same mineral across States.
- We support simplifying a discounted mineral by mineral assessment by grouping minor minerals but otherwise do not support grouping minerals.
- An external standard to weight minerals would not give a reliable result.
- The North West Shelf project would not have proceeded without support from the Western Australian Government. Therefore, either:
  - the State's effort should be recognised as above average, and so the resulting revenues should not be assessed; or
  - the State's effort should be assessed, by netting the costs off the revenues on an amortised whole of project life basis (so that amortised costs relating to the data period are equalised).
- The CGC staff’s apparent reluctance to recognise differential State efforts in developing revenue bases is inconsistent with the CGC’s objective of recognising innate differences in capacity.

The Mining Revenue assessment remains a key issue for Western Australia due to the overwhelming impact it has on the GST redistribution. This assessment is also critical to the integrity of and confidence in the HFE system. It is important that there be ongoing dialogue and consultation between the CGC and the States on this issue (particularly as the Discussion Paper has given little insight into the CGC's thoughts).

Onshore Mining Revenue

The following discussion addresses the questions and issues raised in the Discussion Paper,[1] in the order that they are raised. After that, it presents our views on the appropriate assessment approach, drawing on the earlier discussion.

State Decision Making

The Discussion Paper seeks State views on:[2]

- how likely are States to act on the incentives that would be inherent in a mineral by mineral assessment?
- what lessons can the CGC draw from the recent decision by some States to raise their royalty rates?

In particular, the Discussion Paper alludes to Western Australia's recent increases in the iron ore fines royalty rate, made with the potential outcome of losing more in GST revenue grants than the increase in royalty revenues.

Western Australia's iron ore fines royalty rate increases

Western Australia's iron ore fines royalty rate increases were made on the basis that they were appropriate policy (i.e. the industry no longer required concessional rates). In addition, there were the following considerations.

- Although the 2010 removal of the concessional State Agreements' royalty rate of 3.75% was negotiated after the CGC's 2010 Review (which implemented the current high rate/low rate assessment), this removal had already been State Government policy for a couple of years.

[1] CGC 2013-07-S *Proposed Assessments*, Chapter 6.

[2] CGC 2013-07-S *Proposed Assessments*, page 19.

- Particularly with regard to the further removal of the 5.625% concessional rate (implemented in the 2011 Budget), the State Government perceived HFE as broken, due to the extreme results that it had begun producing for Western Australia, and hence expected reform of the system.
  - This perception has been realised, to some extent, by the recommendations of the GST Distribution Review, and the subsequent 2015 Review terms of reference instruction that the CGC should fix the Mining Revenue assessment.
- It was considered that a loss of over 100% of the royalty revenue would be unlikely to be implemented because it would be inconsistent with the policy neutrality of HFE.
  - This expectation has so far been realised by the CGC's decision in the 2011 Update to not reclassify iron ore fines to 'high rate' and the terms of reference instructions in that and subsequent annual updates to not reclassify iron ore fines.

If a greater than 100% redistribution were to actually occur, this could be expected to be factored into States' policy considerations in the future.

Likely State responses to a mineral by mineral assessment

Under a mineral by mineral assessment, for some minerals changes to the royalty rate would have a very significant (albeit less than 100%) impact on the State's GST grant.

In our submission on the treatment of iron ore fines in the 2014 Update, we modelled an assessment involving nine mineral groups, as a practical approximation of a mineral by mineral assessment. Table 1 shows these nine groups and the policy impact for each State (i.e. the change in GST grant as a percentage of a change in royalty revenue from changing the royalty rate).

Table 1 shows that the largest policy impacts are for Western Australia, for iron ore, diamonds and nickel, which are primarily or solely produced in Western Australia (so the State would lose 86% to 89% of any increase in the royalty rate). Other than Western Australia, the policy impacts are all less than 50% (and generally well under 50%).

Table 1: Policy impacts for a mineral by mineral assessment [(a)]
Estimated for 2012-13 data year [(b)]

Mineral	NSW	Vic	Qld	WA	SA	Tas	NT
Fine iron ore	32%	25%	20%	-87%	6%	1%	1%
Lump iron ore	32%	25%	20%	-86%	5%	2%	0%
Domestic coal	-9%	4%	-5%	2%	4%	1%	1%
Export coal	-12%	25%	-35%	11%	7%	2%	1%
Petroleum	31%	25%	-26%	8%	-41%	2%	-1%
Bauxite	32%	25%	-24%	-36%	7%	2%	-8%
Diamonds	32%	25%	20%	-89%	7%	2%	1%
Nickel	32%	25%	20%	-89%	7%	2%	1%
Other	22%	18%	0%	-30%	-7%	-1%	-5%

Source: Western Australian Treasury estimates

(a) Policy impact equals change in assessed "needs" divided by change in royalty revenue (due to royalty rate change). The change in assessed "needs" becomes a change in GST revenue grants with a time lag.

(b) Estimates using data from the CGC's online assessment system. Some data for other States had to be imputed due to confidentiality restrictions.

Under a true mineral by mineral assessment, the 'other' minerals category would be disaggregated, resulting in more cases of one State having all the production. In most cases, this would be Western Australia. The most significant exception would be phosphate rock, where Queensland is the sole producer, with an $84 million value of production in 2010-11 (a very small proportion of Queensland's $38 billion value of total mineral production in that year).

It would be a matter of speculation how the GST impacts would affect State royalty rate policies in the long run (particularly as CGC assessments are subject to ongoing five-yearly reviews). Royalty rates could be higher or lower depending on the relative importance of economic development issues versus budget management issues.

However, the point is that States should be able to set royalty rates based on sound policy, without having to be concerned about excessive GST impacts.

Grouping of Minerals

The Discussion Paper seeks State views on the advantages and disadvantages of grouping minerals, and how grouping should occur if it is adopted.[3]

We agree with the CGC view that an individual mineral by mineral assessment would give a more accurate equalisation result than any assessment involving grouping.

We consider that some grouping of minor minerals would be acceptable in the interests of simplicity, reduced data requirements and reduced confidentiality concerns.[4]

However, any grouping that allows minerals to move between groups in response to royalty rate changes has the potential for policy impacts exceeding 100%, which would be unacceptably poor policy neutrality. Also, just 'freezing' the groups between method reviews would not be adequate, as States consider the long term when setting royalty rates.

A single category assessment would not reflect revenue capacity differences across minerals and our analysis indicates that it would over-equalise Western Australia compared to an actual per capita (APC) or mineral by mineral assessment.

As discussed in our July 2013 submission to the 2015 Review, we do not believe that any stand alone mining revenue assessment can avoid substantial policy neutrality concerns. Consequently, we consider that there are reasons to prefer an APC assessment, whereby each State's revenue raising capacity is assessed to equal its actual revenue, and to reduce policy neutrality issues through discounting.[5]

- This would take account of the different circumstances (including levels of long-run profitability) of the same mineral across States.
- It would be simpler and less data intensive than a mineral by mineral assessment.

---

[3] CGC 2013-07-S *Proposed Assessments*, page 20.

[4] Western Australia has not been able to share disaggregated data for export and non-export coal, and some other States have had confidentiality concerns with providing royalty and/or value of production data on a disaggregated basis.

[5] Victoria has also supported an APC assessment (albeit without discounting), for broadly similar reasons.

External Standards

The Discussion Paper seeks State views on the possibility of using an external standard, including whether this should be based on international royalty rates or Australian historical royalty rates.[6]

We understand from discussions with CGC staff that under this proposal an external standard would be used to weight the value of production of different minerals. The revenue base would then be the weighted sum of the value of production of all onshore mining. The standard revenue applied to this revenue base would be the actual national onshore mining revenue, as per usual.

We do not believe that an external standard is appropriate.

International royalty rates vary substantially across countries, reflecting substantial policy variations and differences among countries in the costs of mining (including accessibility of minerals, labour costs, and political and social stability). In addition, royalty rates between countries should not be viewed in isolation, but rather in the context of the tax legislation of the country and state/province in question. As such, setting external standards on the basis of international royalty rates without the holistic taxation legislation context will lead to inappropriate assessments.

As well, it would not be meaningful to compare iron ore royalty rates from one country with coal royalty rates from another country, and the relative profitability of minerals in another country may not match Australia.

A historical Australian standard would be less problematic. However, it is still questionable whether this would reflect current underlying capacity to raise royalties.

Treating Royalties as a Price for an Asset

The Discussion Paper raises, but rejects, the option of treating royalties as a price for an asset.[7]

Under this option, royalties would not be equalised as they are received, but the return that would be achieved on the investment of royalties would be equalised.

6 CGC 2013-07-S *Proposed Assessments*, page 20.

7 CGC 2013-07-S *Proposed Assessments*, pages 20-21, paragraphs 33-34.

This approach has theoretical merit. However, it has practical difficulties.

If the CGC had always been treating royalties as capital revenues, the annual equalisation impact might be broadly comparable to the current assessments (and the long run net present value would be the same).

However, if the CGC were to switch approaches now, it could not assess the current investment return on past royalties, as it has already equalised those royalties. There would initially be no impact on GST revenue grants from mining revenues, but the impact would grow as royalty revenues post the switch are aggregated.

The risk with this arrangement is that State governments would be tempted to spend the short term increase in net royalty revenues, knowing that the equalisation of those royalties will not occur until well into the future (and hence would be inherently uncertain). This would cause substantial budgetary problems for later State governments.

Discounting

We believe that the CGC should discount the Mining Revenue assessment by a minimum of one third (33%), and up to one half (50%).[8] [9]

There are five reasons for doing this, which are discussed in turn.

- States' revenue bases are sensitive to their industry policies.
- The assessments are sensitive to changes to royalty rates.
- The assessments require considerable judgement by the CGC.
- States with larger mining industries incur additional expenditures that are not readily quantified.
- There are intergenerational risks from future changes to HFE.

[8] As noted in our July 2013 submission, discounting tax revenue capacity is also appropriate to improve policy neutrality.

[9] The 33% minimum is higher than the 25% suggested in our July 2013 submission, as discussed in the sub-sections below.

State industry policies

The HFE principle requires the CGC to equalise to average revenue effort. However, we consider that States have put differing effort into developing their mining industries.

Western Australia has a decades-long record of encouraging mineral development, helping to ensure a high level of community support for this industry. Western Australia has also been careful to set royalties that balance development needs against the community's right to receive a price for its resources. Some examples include the State Government's cautious approach to setting royalties for gold, iron ore fines, magnetite iron ore and diamonds. Other pointers to Western Australia's high effort are as follows.

- The bauxite mines in Western Australia's environmentally sensitive Darling Range have the world's lowest grade bauxite mined on a commercial scale (around 27-30% alumina) but account for 23% of global alumina production and 60% of Australia's bauxite production, despite Western Australia having only 39% of Australia's economic demonstrated resources of bauxite. Bauxite resources at Weipa (Queensland) and Gove (Northern Territory) have amongst the world's highest grade deposits (49-53% alumina).[10]
- Western Australia accounts for 70% of national gold production, with only 44% of economic demonstrated resources and 40% of inferred resources. South Australia has the next largest share of gold resources.[11]
- While Western Australia has only recently removed a ban on uranium mining, Western Australia accounts for 5% of Australia's economic demonstrated resources and 7% of Australia's inferred resources.[12]
- It is not clear that eastern States' exports of black coal could not now be much greater if further government support had been provided for the development of the resource, including less restrictions on mine development and better infrastructure to avoid the well publicised bottlenecks that have constrained capacity to deliver to customers.

[10] Data in this paragraph sourced from Geoscience Australia, Australia's Identified Mineral Resources 2012 and ABS 8415.0, Mining Operations Australia, 2011-12.

[11] Sourced from Geoscience Australia, *Australia's Identified Mineral Resources 2012*.

[12] Sourced from Geoscience Australia, *Australia's Identified Mineral Resources 2012*.

- The January 2014 Institute of Public Affairs submission to the Australian Government Economic Review of South Australia and Victoria notes that 'South Australia is falling far short of its economic potential ' and 'The vast deposits of minerals located within the state provide every potential of positioning South Australia as a global minerals province of international repute during the twenty-first century. '

With regard to current circumstances, the Fraser Institute takes an annual international survey of mining companies to compare jurisdictions' support for the mining industry. Table 2 summarises the results for each Australian State in the latest survey (lower numbers are better).

Table 2 shows that, for 18 questions, Western Australia was ranked above all other States (i.e. rank of one) for six questions and second for another six questions. This was considerably better than for any other State. At the other extreme was Tasmania, which was ranked worst for 13 questions.

- Western Australia's low ranking on availability of labour and skills is not surprising given the rapid growth of mining in Western Australia.

Table 2: Fraser Institute Survey results
Australian States, 2012-13

1: Encourages investment; 2: Not a deterrent to investment; 3: Mild deterrent to investment; 4: Strong deterrent to investment; 5: Would not pursue investment due to this factor

	Average rating by survey respondents							WA
	NSW	**Vic**	**Qld**	**SA**	**Tas**	**NT**	**WA**	**rank**
Mineral potential [(a)]	2.19	2.35	1.94	1.88	2.54	1.73	1.68	1
Policy/mineral potential [(b)]	2.07	2.30	1.59	1.65	2.11	1.64	1.49	1
Environmental regulations	2.72	3.03	2.65	2.13	3.23	2.15	2.15	2
Regulatory duplication/inconsistency	2.60	2.76	2.67	2.35	2.93	2.20	2.23	2
Legal system	1.65	1.72	1.77	1.56	1.80	1.47	1.50	2
Taxation regime	2.67	2.46	2.61	2.61	2.72	2.63	2.58	2
Uncertainty land disputes claims	2.38	2.38	2.31	2.35	2.47	2.40	2.27	1
Uncertainty re protected areas	2.52	2.69	2.70	2.48	3.13	2.43	2.31	1
Quality of infrastructure	1.94	1.90	2.07	2.23	2.10	2.15	2.03	3
Community development conditions	1.98	2.05	2.03	1.96	2.17	2.09	2.04	4
Trade barriers	1.68	1.63	1.74	1.80	1.69	1.80	1.77	5
Political stability	1.63	1.40	1.60	1.46	1.64	1.35	1.42	3
Labour regulations/militancy	2.54	2.50	2.38	2.44	2.65	2.22	2.27	2
Quality of geological database	2.54	2.50	2.38	2.44	2.65	2.22	2.27	2
Security situation	1.23	1.15	1.21	1.20	1.14	1.18	1.19	4

Availability of labour and skills	1.93	1.87	2.04	1.90	2.18	1.96	2.05	6
Corruption	1.60	1.40	1.47	1.39	1.57	1.40	1.37	1
Growing/lessening uncertainty	2.32	2.40	2.34	2.21	2.57	2.05	2.01	1

Source: Calculated from http://www.fraserinstitute.org/research-news/display.aspx?id=19401

(a) Assuming current regulation/land use restrictions.

(b) Assuming no land use restrictions in place and assuming industry 'best practices '.

It is not possible to determine what mining value of production would be under average industry policies, but it is reasonable to conclude that Western Australia's production would be lower than it is.

In addition, the redistribution of royalties through the HFE process significantly reduces the net economic benefit of mining projects to States, putting the approval of projects more at risk from government policies that seek to balance benefits from the projects against costs (including risks for government expenditure, and environmental and amenity impacts). Hence the approval of projects is more likely to be influenced by policy considerations that may differ from State to State.

The importance of this issue is illustrated by the results of an indicative economic modelling exercise conducted by the Economic and Fiscal Analysis Directorate within the Western Australian Treasury. This analysis involved modelling the economic impact on Western Australia of a new iron ore project over the period 2013-14 to 2034-35 (covering $12 billion investment and subsequent operation of the project). It showed that the benefit to the Western Australian economy from this project, measured in terms of real consumption, fell from $24 billion (if the State retained all royalties from the project) to $10 billion (if the State loses 90% of royalties from the project due to fiscal equalisation).[13]

The CGC deals with uncertainty in its assessments due to poor quality data by discounting. Lack of policy neutrality in the mining revenue base data is a data quality issue that warrants a discount.

Impact of changing royalty rates

Any form of mining revenue assessment based on internal standards will generate large GST impacts for Western Australia when royalty rates change. This is not consistent with policy neutrality.

[13] The national benefit from the project (in terms of real consumption) is estimated to be $54 billion if Western Australia retains all the royalties and $45 billion if 90% of the royalties are redistributed to other States.

We believe that any State should retain at least one third of the revenue raised from a royalty rate increase after GST impacts, to retain a reasonable incentive for the community to develop its finite resources and require an appropriate return.

- This cannot be delivered by any grouping of minerals that is sensitive to royalty rates.
- It could be delivered by a single category assessment, but only at the cost of ignoring the differences in revenue capacity across minerals, which in turn would require a significant discount to be applied to the assessment to reflect uncertainty.
- We believe it should be delivered by appropriate discounting (around 33%) of the APC and mineral by mineral assessments, which otherwise give good recognition of differences in revenue capacity across minerals, but are too policy sensitive to be used without discounts. In addition, discounting is necessary for other reasons (see above and below).

Judgements required by the CGC

The Discussion Paper states:[14]

> ... the mining assessment will require the commission to exercise a large degree of judgement ...

The fact that the assessment requires a 'large degree of judgement ' demonstrates that the results will be uncertain. Again, consistent with the CGC's treatment of uncertainty elsewhere, this warrants discounting.

Mining related expenditures

As discussed in our July 2013 submission, States with large mining industries incur substantial additional expenditures. Ideally, the CGC would assess these expenditures. In practice, these expenditures are hard to quantify due to limitations in the range and quality of data; policy contamination of data; and difficulty in directly observing or understanding many things that 'States do'. While the CGC may identify some of these expenditures, it is likely it will struggle to provide a comprehensive assessment. A pragmatic way of addressing this problem is to discount the Mining Revenue assessment.

---

[14] CGC 2013-07-S *Proposed Assessments*, page 20, paragraph 32.

In our July 2013 submission we suggested a minimum 25% discount, assuming that mining related expenditure needs (possibly around $2 billion per annum for Western Australia) could be adequately identified. As full identification seems unlikely, we now propose a minimum 33% discount, consistent with the need to keep GST impacts from royalty rate changes below two thirds (see above).

Intergenerational risks from future changes to HFE

HFE currently equalises revenues from the exploitation of mineral endowments. However, there is no guarantee that the future form of HFE will appropriately support States whose resources have been depleted. States should not be asked to simply trust that the system will support them in the long term.

In the absence of HFE, revenues could be held in a fund to assist with economic adjustment and support future generations.[15] Consequently, the current form of HFE creates a future economic adjustment risk for resource States. In principle, this risk should be recognised by HFE through appropriate discounting, as it is relevant to ensuring equalisation over time on a risk-weighted basis.

Conclusion on the Assessment of Onshore Minerals

The CGC's task is to implement HFE. Therefore, it should start with the assessment model that would in theory give most accurate results in the Australian context (i.e. avoid reliance on international comparisons). We believe that this would be either an APC assessment or a mineral by mineral assessment.

In practice, this assessment would require significant discounting to address policy influences on the revenue bases, sensitivity to changes in royalty rates (keeping this sensitivity to less than two thirds), the high degree of judgement needed by the CGC, and unassessed mining related expenditures.

[15] Western Australia has sought to do this with a Future Fund, but contributions to this fund are currently limited to 1% of royalty revenues, plus savings from the *Royalties for Regions* program, reflecting the redistribution of about 75% of Western Australia's royalty revenues through HFE.

Grants in Lieu of North West Shelf Royalties

Western Australia invested considerable resources into ensuring that the North West Shelf project occurred but about 89% of these grants (all except our population share) are redistributed to other States.

The Discussion Paper questions whether Western Australia's investment was above average effort, or whether any State would have done the same.[16]

In either case, the grants in lieu of North West Shelf royalties should be discounted.

- If Western Australia's effort were above average, then the resulting revenues should not be equalised, as they do not reflect average policy.
- If Western Australia's effort were average policy, then the ongoing amortised cost of that effort over the total project life should be equalised. In effect, only the revenues net of deducted amortised costs over the life of the project should be assessed.[17]

In the November 2013 telepresence meetings, CGC staff verbally suggested that the North West Shelf would have proceeded regardless of Western Australia's efforts, based on opinions it has received (the basis for which has not been provided).

We believe that it would not have proceeded, or that at least it would have been delayed by decades, resulting in far lower revenues at present.

As discussed in Appendix A of our July 2013 submission to the 2015 Review:

- the 'take or pay' domestic contract offered by the State Government was a key factor in helping Woodside Petroleum (a 50% partner in the project) raise a US $1,350 million limited recourse loan facility to finance over 90% of its share of the development cost; and
- domestic sales revenue under this contract was 'crucial ' to financing the project during substantial delays in finalising export contracts.[18]

---

[16] CGC 2013-07-S *Proposed Assessments*, page 179, paragraph 60.

[17] Note that this would not involve the retrospective assessment of additional costs for the data years covered by past method reviews, but would assess the portion of the costs amortised across current and future years.

[18] Clements K and Greig R, 1991. *The Economic Impact of Australia's North West Shelf Project, Discussion Papers 91.15 and 91.16*. Economic Research Centre, Department of Economics, The University of Western Australia, September, pages 10 and 115.

This contract guaranteed a steady long-term revenue flow for the project to underpin the initial investment (which was then the most expensive resource development undertaken in Australia), at a time when the export market was considered uncertain (because of unpredictable energy prices and because of the caution of Japanese buyers).

As noted by Robert Murray, "the joint venture decided, after months of agonising, to proceed first with supplying gas to the Western Australian (or domestic) market. LNG to Japan would follow as an integrated second phase. The main reason for this was that none of the parties ... felt ready to proceed to LNG. Parent companies were nervous of laying out the capital in the unpredictable price situation and the Japanese, for this and other reasons, were not yet ready to take the gas. On the other hand, the agreements with the State Energy Commission of Western Australia assumed that the gas would be available by 1984 ... The joint venture companies did not expect to make a profit from 'domgas', as the volume was not large enough, but it tried to avoid an outright loss. By going ahead and building a platform, pipeline and processing plant, it lost some bargaining leverage with the Japanese, whose custom would be needed to make the facilities profitable. But it believed the credibility to be gained from a successfully functioning field would more than offset this."[19]

In this regard, Robert Murray notes that the Japanese "were by far the world's largest consumer of LNG",[20] and quotes Russell Caplan (who became General Manager, Natural Gas for Shell Australia in 1986) as saying that "Experience shows that LNG is unlike coal or iron ore or wheat; there is much less holding people to ransom and the situation is more like a long-term marriage. The LNG buyers, as utilities, have an absolute commitment to their customers to have complete reliability of supply. The Japanese are very sensitive on reliability of supply and are prepared to pay for it. But at the same time, we as suppliers had to be fully conscious of our obligation."[21]

---

[19] Murray R, 1991. *From the Edge of a Timeless Land, A history of the North West Shelf Gas Project*, Allen & Unwin, pages pages 86-87.

[20] *ibid*, page 129.

[21] *ibid*, page 130

An issue for the joint venture was that "One of the conditions for avoiding a loss on 'domgas' was the development of a somewhat larger domestic market. However, the joint venture participants had found to their dismay that the anticipated lucrative market in the Pilbara was a mirage. …Once again Sir Charles Court saw the project floundering in need of rescue. …he agreed that SECWA should take over responsibility for 70 million cubic feet a day of gas earmarked for the Pilbara. This was in addition to SECWA having exercised its option the previous year for the amount of 50 million cubic feet a day in addition to the contracted 250 million cubic feet. A market would have to be found now for a total of 370 million cubic feet a day for the whole State. …The joint venture partners insisted on [a 95 per cent 'take or pay' commitment] for all three categories of gas."[22]

The State Government also financed the construction of the Dampier to Bunbury Natural Gas Pipeline, which connected the North West Shelf project to domestic customers in Perth and the South West.

Overall, it is considered that Western Australia had good reasons to provide such industry support. Governments do not have the luxury of seeing into the future, and the CGC should not take it on itself to reconsider what were at the time important policy imperatives.

The Discussion Paper also suggests that Western Australia's efforts in developing the North West Shelf should only be recognised if other States' efforts in developing their revenue base are recognised.[23]

- We agree that, in principle, all policy influences should be assessed. However, in practice, per capita differences among the States in most revenue bases are far smaller than for mining revenues, so the different policy influences on these revenue bases are likely to be far less material.
- Furthermore, if the CGC wishes to insist upon only assessing influences when all corresponding differences in fiscal capacity can be assessed, then not only should it not be assessing the differences in effort in developing revenue bases, but it should also not be assessing the differences in those revenue bases.

[22] *ibid*, page 87.

[23] CGC 2013-07-S *Proposed Assessments*, page 179, paragraph 61.

Finally, the Discussion Paper states [emphasis added]: [24]

> To override the observed differences in tax bases which States have to deal with today, **on the grounds of policy neutrality** or because of what States did up to a quarter of a century ago, appears to be placing secondary considerations before the task the commission is asked to perform.

We cannot understand how this comment can be reconciled with the reference to average revenue raising effort in the HFE principle, with the policy neutrality supporting principle, or with the stated CGC objective to equalise for **innate** differences in capacity.

[24] CGC 2013-07-S *Proposed Assessments*, page 179, paragraph 62.

8. Other Revenue

Key Points

- We do not believe that there is any reliable conceptual basis for a gambling revenue assessment, due to the conflicting research on whether gambling rises or falls with income.
- We believe that emergency service levies are more like user charges than land taxes, and should continue to be assessed EPC.
- We do not believe that the CGC has identified a valid measure of revenue raising capacity for the aggregate of user charges that are currently assessed EPC, or that it should use a global measure for these if it continues to insist on a legal incidence approach elsewhere.
- Interest and dividends should continue to be assessed EPC, because the assets that generate these revenues are equalised in the Net Lending assessment.

Gambling Revenue

Given conflicting research on whether gambling rises or falls with income, we do not believe that there is any reliable conceptual basis for a gambling revenue assessment. Consequently, these revenues should be assessed on an EPC basis.

Fire and Emergency Services Levies

Western Australia's Emergency Services Levy (ESL) is levied on the same basis as council rates in Western Australia, which is gross rental value[1]. This means that the ESL is levied on the improved value of land (unlike land tax, which is levied on unimproved land values).

In addition, our ESL is more like a user charge than a land tax as:

- the ESL rate varies depending on where the taxpayer lives and what level of service they can expect to receive (e.g. professional firefighters versus volunteers);

[1] Gross rental value is the gross annual rental that the property might reasonably be expected to realise if let on a tenancy.

- the rate of the levy is set each year such that only the required level of funding is raised;
- the gross rental value bears a closer relation to the value of asset being protected than the land value; and
- it has a broader coverage than land tax, with residents, State government departments and not-for-profit organisations (for example) paying ESL.

All money raised from the ESL is hypothecated to the Department of Fire and Emergency Services and constitutes around 80% of its budget.

As the ESL is effectively a user charge we recommend that ESLs continue to be assessed EPC.

If ESLs were to be assessed differentially, and if the CGC retains a legal incidence approach to assessing revenues, then ESLs would require a separate assessment to land tax, due to their different revenue bases.

User Charges

The Discussion Paper[2] examines aggregate user charges that are currently assessed EPC, and presents analysis of their relationship with each of GSP and equivalised household income.

The relationship with GSP has an R-squared of 0.56 for the latest two years, which is quite a poor relationship, and an R-squared of only around 0.25 in previous years. The relationship with household equivalised income has an R-squared of only 0.35 in the years examined (the latest available data being 2009-10).

- We note that the global revenue assessment that we presented in our July 2013 submission gave a much better R-squared relationship for all taxes and onshore mining royalties of 0.995 using the latest six years of data.

However, we would be concerned if the CGC implemented a global measure for user charges, while insisting upon a legal incidence approach elsewhere. The CGC should be consistent in this regard.

[2] CGC 2013-07-S *Proposed Assessments*, pages 26-28.

Revenues Generated from Asset Holdings

The Discussion Paper[3] appears to express some uncertainty about treatment of revenues generated from asset holdings (i.e. interest and dividends).

The CGC's Net Lending assessment equalises States' per capita capacity to hold revenue generating assets. Therefore, a continued EPC assessment of revenues generated from asset holdings is appropriate.

[3] CGC 2013-07-S *Proposed Assessments*, page 28, paragraph 31.

9. Schools Education

Key Points

- We disagree with the proposal to use actual enrolments (instead of standardised enrolments) for the pre-compulsory and post-compulsory school age groups as we believe actual enrolments do not represent an equal standard of service and are still policy influenced.
- We support the recommendation to use the cost weights derived from the 'My Schools' data, provided that the quality of the data across all jurisdictions can be assured.
- We believe that Indigenous and non-Indigenous socio-economic status should be calculated separately.

Actual versus Standardised Enrolments

The Discussion Paper[1] proposes replacing standardised enrolments with actual enrolments for the pre-compulsory and post-compulsory years, on the basis that State policies for these years have converged. We do not support this proposal.

However, we are concerned that actual enrolments data for pre-compulsory years are still policy influenced, and the data is not comparable across States.

The Productivity Commission's latest annual data (for 2012) from the Report on Government Services (ROGS)[2] suggests that there may be policy influences in the pre-compulsory enrolments, as the proportion of children aged 4 and 5 years enrolled in a preschool program in the year before full time schooling varies significantly between the States (66% for New South Wales to above 100% for Victoria, Tasmania and the ACT).

In addition, the proportion of children enrolled in a preschool program that are enrolled for 15 hours or more varies from 33% in Victoria to 91% in Tasmania.

1 CGC 2013-07-S *Proposed Assessments*, page 32.

2 Report on Government Services (ROGS) 2014 *Volume B: Child care, education and training,* Tables 3A.16 and 3A.17.

There are also various data comparability issues with the ROGS data, including undercounting in New South Wales and overcounting in Queensland.

Similarly, policy neutrality for post-compulsory secondary school education depends on all States enforcing to the same extent the same requirements for students after Year 10 (i.e. that a student must be enrolled either in school, training or employment until age 17). It is also the case that post-secondary enrolments can be affected by unequal standards of service in vocational education and training.

Calculating Cost Weights

We agree with the CGC that it is more costly for States to provide school services to some student groups. These groups include Indigenous students; students with low English fluency; students from a low socio-economic status (SES) background; and students living in remote areas.

We believe that large reliable datasets of spending on public schools (e.g. spending on individual schools, or total spending cross-classified by relevant factors) offer the best chance for quantifying disability factors, through statistical analysis, rather than deriving weights from the previously supplied State data.

In our July 2013 submission, we performed regression analysis, at the individual school level, on Western Australian 'My Schools' data from the Australian Curriculum, Assessment and Reporting Authority (ACARA). The analysis highlighted the dominant influence of Indigeneity and remoteness (as well as students from non-English speaking backgrounds).

We support the recommendation to use the cost weights derived from the 'My Schools' data provided that the quality of the data across all jurisdictions can be assured.

We also suggest that the CGC should calculate the SES of Indigenous students separately to the SES for non-Indigenous students to avoid biased outcomes. The analysis in our July 2013 submission found that whereas non-Indigenous SES generally improves with remoteness, the opposite is the case for Indigenous SES, indicating there is no relationship between Indigenous and non-Indigenous SES. We understand that the CGC has accepted this and is developing separate SES measures for Indigenous and non-Indigenous communities.

10. National Education Reform Agreement (NERA)

Key Points

- We recommend that the CGC makes its own assessment of disability factors using its normal approach, covering both the influences covered by the NERA disadvantage loadings and other influences.
  - It makes no sense to equalise to NERA targets on 'Schooling Resource Standard' (SRS) base funding and loadings that States have not achieved, are not intended to achieve for many years under NERA, and may never achieve given the current political climate.
- We further recommend that Commonwealth funding be treated by the inclusion approach to ensure that States such as Western Australia are not disadvantaged by receiving low shares of Commonwealth funding due to having high levels of State funding. We consider this to be fully consistent with the CGC's terms of reference.
- To satisfy the 'no unwinding' requirement in the terms of reference, a State could receive an adjustment to its GST grant if its actual resourcing is greater than what the CGC would otherwise assess, and this difference is not due to the State over-resourcing some schools relative to the NERA SRS targets, or to some disability (e.g. wages) that is not reflected in the NERA disadvantage loadings.

The CGC has been given two instructions with regard to NERA in Clause 6 of its terms of reference, as follows:

> The Commission will ensure that the GST distribution process will not have the effect of unwinding the recognition of educational disadvantage embedded in the NERA funding arrangements. The Commission will also ensure that no State or Territory receives a windfall gain through the GST distribution from non participation in NERA funding arrangements.

While NERA has not been signed by all States, all States (including Western Australia) are receiving funding from the Federal government as if they have already signed NERA.

The Commonwealth has committed to funding (in accordance with NERA) for only the forward estimates period. The CGC should note that this equates to only a small proportion of the additional funds originally envisaged under NERA, as a majority of the additional funding was committed to by the previous Federal Government in the 'out years'. As a result, the CGC cannot assume these additional payments will be part of the arrangements.

As discussed in our previous submission, we do not support backcasting of new arrangements, including the NERA, as this distorts the achievement of HFE over time, and is often unreliable due to inadequate information on the situation in the grant year.

Dealing with the NERA Instructions

The NERA has a number of SRS loadings for educational disadvantage, recognising indigeneity, socio-economic status and remoteness.

The SRS base funding and loadings are targets, intended to be achieved over time. The Commonwealth will contribute 65% of growth funding to achieve these targets, so States like Western Australia that have better resourced their schools will receive less funding.

Hence, as stated in our previous submission, we feel Western Australia should be compensated for its low NERA funding relative to the national average, to ensure that it is not disadvantaged by its relatively high existing State funding for education. Anything else would not be policy neutral.

This appears to us to be fully consistent with the CGC's terms of reference, particularly as all States are now receiving funding on a 'participating' basis.

The 'no unwinding' requirement appears to be fundamentally ambiguous, judging from the different views put forward to date, and the three very different options put forward by the CGC as 'consistent with different interpretations of the 'no unwinding clause'.

From our perspective, it makes no sense to equalise to NERA targets on SRS base funding and loadings that States have not achieved, are not intended to achieve for many years under NERA, and may never achieve given the current political climate. There can only be something to 'unwind' to the extent that a State's actual resourcing is greater than what the CGC would otherwise assess, and that this difference is not due to the State over-resourcing some schools relative to the NERA targets, or to some disability (e.g. wages) that is not reflected in the NERA targets.

This suggests that, as argued in our previous submission, a good starting point for the CGC is to apply its normal fiscal equalisation approach for School Education. This would involve the CGC making its own assessment of disability factors, covering both the influences covered by the NERA disadvantage loadings and other influences (such as interstate wage differentials).

To satisfy the 'no unwinding' requirement, a State could receive an adjustment to its GST grant if it could be demonstrated that the application of CGC assessments results in a State's actual resourcing being greater than what the CGC would otherwise assess, and that this difference is not due to the State over-resourcing some schools relative to the NERA targets, or to some disability (e.g. wages) that is not reflected in the NERA targets.

11. Post-Secondary Education

Key Points

- We support the recommendation to move all vocational education and training (VET) expenses in the Services to Industry category to the Post-Secondary Education category.

The Post-Secondary Education category is intended to cover all State expenses on VET.

In the 2010 Review, the (then) small amount of State spending on VET programs provided by organisations other than those provided in Technical and Further Education (TAFE) institutions was left in the Services to Industry category (reflecting its Government Purpose Classification). The Discussion Paper[1] notes that, since the 2010 Review, these VET expenses in the Services to Industry category have grown considerably due to the increased role of private registered training organisations.

We support the Discussion Paper proposal to move all VET expenses in the Services to Industry category to the Post-Secondary Education category, where needs related to these expenses are being recognised.

[1] CGC 2013-07-S *Proposed Assessments*, Chapter 10, pages 56-57.

12. Public Hospitals

Key Points

- The new activity based funding data is not yet of sufficient quality for CGC assessment purposes.
  - Even when the quality improves, the data will not cover smaller hospitals, which are important for CGC purposes as these hospitals tend to be more remote, and hence tend to have a higher proportion of (generally higher cost) indigenous patients.
- We recommend that the CGC retain the subtraction method for assessing non-State services, as it is simple, conceptually reliable and practical.
- The CGC has not presented a conceptual basis for how economic environment factors would be constructed, and we are unsure how such a conceptual basis can be derived.
  - If the CGC does pursue economic environment factors, we recommend that it use the subtraction method as a reality check.
- We recommend that the CGC consider extending the subtraction method to admitted patient services.
- We consider almost all State and non-State services to be substitutable.
- Western Australia has low non-State service provision.

Activity Based Funding (ABF) Data

The Discussion Paper[1] proposes that new ABF data under the National Health Reform arrangements be used to expand the existing Admitted Patients assessment to a Public Hospitals assessment (covering both admitted and non-admitted patient services provided in hospitals).

We believe that the ABF data is not yet of sufficient quality for CGC assessments, and that it will be inadequate even when the quality improves.

1 CGC 2013-07-S *Proposed Assessments*, pages 59-61.

Our Health Department advises that the primary areas of concern with the quality relate to the following.

- Admitted sub-acute - The AN-SNAP classification is a proxy classification subject to further development. The collection of relevant information to classify episodes to AN_SNAP is at various stages of maturity in the different jurisdictions. The lack of an Australian admission policy potentially leads to different approaches to identifying episodes as sub-acute.
- Emergency Department - The URG classification is also a proxy classification which does not use individual patient characteristics. This information is considered variable across Australia due to a lack of consistent admission criteria.
- Non-admitted - This is the activity of most concern given the variability across and within jurisdictions in capturing this information consistently and comprehensively. The classification system Tier 2 Clinics is also a proxy classification subject to development of a new system based on patient characteristics rather than provider characteristics. The capture of non-admitted data is the subject of considerable work across all jurisdictions and as such is continuing to improve. However, the existing data has to be treated with caution, particularly if comparing across jurisdictions.
- Mental Health - The development of a suitable classification system for Mental Health is still being undertaken. Non-admitted Mental Health will continue to be block funded in 2014-15. The Mental Health classification development will possibly not be able to be implemented until 2016-17 given the requirement to develop systems to capture the relevant information once a classification system has been finalised.

Even when the data improves, there will not be data for smaller hospitals, which will continue to be block funded. For the CGC's purposes, this is a serious omission, as these hospitals tend to be more remote, and hence tend to have a higher proportion of indigenous patients (as well as less access to non-hospital service providers). Hence, demand and costs at these hospitals are important for measuring key disabilities.

Substitution with Non-State Services

The CGC currently assesses non-admitted hospital patient services in the Community and Other Health Services category, using a subtraction method to take account of non-State services that substitute for State service provision. The Discussion Paper[2] proposes that the subtraction method be replaced with a set of economic environment factors, based on indicators of the size of the non-State sector.

We believe that the CGC should retain the subtraction method. It should also consider extending this method to admitted patient services. (Further below we discuss the substitutability of almost all State and non-State services.)

The Discussion Paper[3] describes the subtraction method as a "simple assessment of private sector influences", acknowledging that the alternative is more complex.

Furthermore, the CGC has not put forward any conceptual basis for how economic environment factors would be constructed.

- At the November 2013 telepresence meetings, CGC staff suggested that an economic environment factor could be constructed from the inverse of per capita private doctor numbers. This would make the factors move in the right direction, but does not provide any basis for determining the size of the factors.
- Economic environment factors prior to the 2010 Review were quite arbitrary in construction.

Economic environment factors for non-admitted hospital services would need to capture the aggregate impact of multiple factors, including State provision of substitutable services outside hospitals, degree of community access to private services, cost competitiveness of private services, community incomes, and overall community demand for these services across the different modes of provision (i.e. State hospital, State out of hospital and private provider). Reflecting this complexity, we are unable to see how the economic environment factors could be quantified even on a conceptual basis. The ability of the subtraction model to work around this difficulty is a key advantage of that model.

---

2 CGC 2013-07-S *Proposed Assessments*, pages 66-68.

3 CGC 2013-07-S *Proposed Assessments*, page 61, paragraph 13.

If the CGC does proceed with economic environment factors, it should use the subtraction method as a reality check on the results.

At the November 2013 telepresence meetings, CGC staff expressed a concern with the volatility of the subtraction approach, and suggested that provision of services by the States does not respond as quickly as changes in non-State provision.

- In practice this simply means that, when non-State provision rises in a State, the standard of service in that State rises (e.g. waiting lists shrink). However, the CGC is supposed to be measuring what States need to spend to provide the average standard of service. This spending requirement does change as quickly as the non-State provision changes.

Substitutability of State and Non-State Services

The vast majority of services delivered in or through public hospitals are also delivered by private providers.

Inpatient services

Patients receiving hospital inpatient services may be treated as public or private patients in public hospitals or as private patients in private hospitals. Governments also contract private hospitals to deliver public inpatient services. Traditionally, private hospitals have provided services at the less complex end of the inpatient spectrum of services, including elective surgery procedures, and especially surgical services provided on a day patient basis. However, in all States, there has been a trend for private hospitals to take on more complex (and less urgent) procedures and also provide emergency care (e.g. via facilities such as intensive care units).

Outpatient services

Outpatient services are generally provided on a public patient basis. However, under agreement with the Commonwealth, States have introduced arrangements wherein, if referred to a named specialist, patients may be treated as private patients of the specialist to whom they are referred, with the bill for the doctor’s services met by the Commonwealth through the Medicare Benefits Schedule (MBS).

Importantly, outpatient services are generally substitutable for services delivered by private specialists in their rooms and by allied health professionals.

Emergency department services

Emergency department services are also substitutable with private hospital emergency department services and general practice services. The more acute services delivered by public hospital emergency departments are also delivered by private hospital emergency departments (e.g. St John of God Murdoch Hospital in Western Australia).

In respect of lower acuity emergency department attendances, the fact that many people attending public hospital emergency departments could alternatively see a private general practitioner has been an ongoing source of tension between the Commonwealth and State governments.

- In 2007, New South Wales commissioned Booz Allen Hamilton to undertake a study on the source of demand for hospital emergency department presentations, considering factors that had contributed to demand growth in emergency departments in 2005-06.

  The study determined that primary care type patients consistently made up 44% of all emergency department presentations overall and were growing at 6.0% annually. The study defined primary care patients as patients who fall into triage categories 4 and 5 (maximum waiting times of 60 and 120 minutes respectively), who were not subsequently admitted to any ward and did not arrive by emergency vehicle.

Reasons why people may seek services from a public hospital emergency department instead of a general practitioner include:

- the service is provided free of charge by a public hospital, but the patient is likely to face out-of-pocket expenses if they obtain the service from a private GP;
- the service is often more comprehensive in that it includes access to diagnostic facilities on site and at the same visit, unlike a visit to a general practitioner (which may entail referrals to one or more diagnostic services providers), thus a 'one-stop-shop'; and
- inability to access a private general practitioner, which is particularly the case outside of normal business hours and in country areas. For Western Australia, in country areas a severe shortage of general practitioners often leads to almost exclusive reliance on public hospitals to access primary care services

Non-hospital services

The range of non-hospital based services provided by State health systems are also substitutes for services provided by private practitioners and for hospital-based services.

In this regard, child and community health services are an important area of health service provision, with care provided via clinics instead of in hospital.

In relation to child health, healthy growth and development in children is maximised through the provision of programs to protect health and/or detect early disease such as ante- and post- natal care, immunisation, and school-based screenings.

Community health services are an integral part of the health care continuum, including services such as physiotherapy, nutrition (dietetics), and occupational therapy and covering a broad range of services for the wider community in areas such as women's health.

The services provided by the clinics are generally substitutes for service provided by general practitioners. In many locations, it is the most practical option to locate these services within a hospital as opposed to having a separate clinic.

Other examples of services are:

- community (adult, older adult and child and adolescent) mental health;
- community midwifery services;
- alcohol and drug outpatient services in remote communities;
- telehealth consultations; and
- ambulance services.

Lower Non-State Provision in Western Australia

Not only are services substitutable, but there are increased demands on the Western Australian Government due to the relatively low provision of non-State services in Western Australia.

In the existing Admitted Patient Services category, the CGC only picks this up to the extent that non-State services are reduced nationally in more remote regions.

Table 1 shows Western Australia's low level of private hospital beds.

Table 1: Private Hospital Beds (Acute and Psychiatric Hospitals), 2011-12

	Beds	Beds per capita
Western Australia [(a)]	3,580	667
Australia [(b)]	26,031	864

Source: Western Australian data from WA Health Licensing and Accreditation Regulatory Unit
Australian data from ABS, *Private Hospitals*, 2011-12, cat.4390.0.

(a) At December 2011.

(b) Average of quarterly data.

Table 2 shows Western Australia's low level of non-State expenditure on private hospitals.

An example of the additional pressures faced by the Western Australian Government is renal dialysis.

- This is a procedure for which indigenous persons are highly over represented.
- The level of cover for renal dialysis provided by private health insurance funds in Western Australia (including national funds) is well below the cover provided in other States and also well short of meeting what would need to be charged for these services. This is effectively preventing the development of private dialysis services in Western Australia. Hence, all of the demand for dialysis falls on the public system.
- This is simply a commercial decision by the insurance funds.

Table 2: Non-State Expenditure on Private Hospitals,[(a)(b)] 2011-12

State	Expenditure $m	Expenditure $pc	Relative to National
NSW	3,199	441	90.4%
Vic	2,854	512	104.8%
Qld	2,590	574	117.5%
WA	1,114	467	95.5%
SA	730	444	90.9%
Tas	274	535	109.6%
ACT	151	407	83.4%
NT	69	297	60.8%
Total	10,981	488	100.0%

Source: AIHW, *Health Expenditure Australia* 2011-12, Supplementary Tables, Appendix B (State expenditure matrixes)

(a) Includes all Commonwealth Government spending (including premium rebates), health insurance funds, individual contributions, and other sources including expenditure on goods and services by workers compensation and compulsory third party motor vehicle insurers, and other sources of income for service providers (e.g. interest earned).

(b) Excludes expenditures by State governments.

13. Community Health

Key Points

- As discussed in the Public Hospitals chapter of this submission, we support the continued use of the subtraction model to assess Community Health services (including those provided by public hospitals), as it is conceptually sound and reliable; and we are not convinced that economic environment factors for the proposed new health categories can be adequately conceptualised and quantified.

The Discussion Paper[1] proposes that:

- non-admitted hospital services be moved from the existing Community and Other Health Services category to an expanded Public Hospitals category; and
- the subtraction method of assessing non-State services be replaced by economic environment factors, in both the new Public Hospitals category and the new Community Health category.

As discussed in the *Public Hospitals* chapter of this submission, we do not support either of the above proposals.

The following comments elaborate further regarding the merits of the existing subtraction model (which covers community health-type services in both public hospitals and the community) versus the proposed approach.

Both conceptual and data issues are a formidable obstacle to developing a Community Health assessment that excludes comparable public hospital services.

1 CGC 2013-07-S *Proposed Assessments*, Chapter 11.

During the 2010 Review the CGC noted the following about the subtraction model covering community health-type services in both public hospitals and the community: [2]

> The subtraction model approach is consistent with the top down approach to the development of assessments and the assessment guidelines. It allows us to assess a broad range of expenses in one assessment using reliable data that are fit for purpose. We prefer this broad approach to a service by service approach because reliable administrative data are not available to directly measure socio-demographic composition influences across most State community and other health services.

We continue to support the subtraction model approach as it is conceptually sound and quantifiable.

The Discussion Paper suggests that the subtraction model would be more difficult for a smaller Community Health category.

- While this is obviously true, the point is that the subtraction model should continue to cover non-admitted patient services in public hospitals (and should potentially be extended to admitted patient services).

As with hospital non-admitted patient services, the conceptual basis for quantifying a non-State services factor for the CGC's proposed smaller Community Health category is opaque to us. The conceptual difficulties noted in the *Public Hospitals* chapter apply also here.

In addition, any proposed economic environment factor based on a measure of general practitioner services would not recognise that many community health services are performed by other practitioners who are not doctors.

The lack of good data will also make an assessment of community health services outside public hospitals difficult.

The Western Australian Health Department has advised that it is able to provide some global figures about how much it spends on these types of services. However, it is not possible to say how much an individual service costs or how much is spent on different population groups. It is understood that other jurisdictions are in a similar position. It is also understood that these services are not on the Independent Hospital Pricing Authority's work plans for the near future.

2 CGC 2008/20 *Community and Other Health Services*, paragraph 14.

The Western Australian Health Department has also advised that, while aggregate data about activity is collected for these services, there is uncertainty about its reliability and the data set does not refine down to what types of services are being provided and to whom. The data are simple counts of occasions of service, with some group activity information, but no indigenous nor age information.

14. Welfare

> ***Key Points***
>
> - It is unclear whether the CGC has appropriately reflected the terms of reference requirement to assess aged care and disability services as State services where these have not been transferred to the Commonwealth under the National Health Reform Agreement.

As noted in the Discussion Paper[1]:

- the terms of reference requires aged care and disability services that have not been transferred to the Commonwealth under the National Health Reform Agreement to continue to be assessed as State services; and
- Western Australia is the only State that has not agreed to transfer aged care responsibilities to the Commonwealth.

In our view, this means, in effect, that the CGC needs to assess Western Australia as having a spending requirement, while other jurisdictions are assessed as having no spending requirement. At the same time, the CGC would assess Commonwealth grants (net of reductions to other States consequent on the transfer of aged care services to the Commonwealth) by the inclusion approach (but excluding Commonwealth fee-for-service payments to States which provide aged care services on behalf of the Commonwealth).

However, in its Discussion Paper, the CGC uses a quite different analysis (from the 2013 Update) which presumes that all States have aged care service responsibilities. It is unclear whether this is equivalent to what we are proposing.

We therefore ask the CGC to review its analysis.

As the CGC notes, we have provided evidence of a cost of living disability in relation to housing services. This issue is further addressed in the *Housing* chapter.

Costs associated with fly-in fly-out workers are addressed in our *Mining Related Expenditure* chapter.

---

[1] CGC 2013-07-S *Proposed Assessments*, page 78.

15. Disability Services

Key Points

- The National Disability Insurance Scheme (NDIS) trials highlight other evidence that disability service demands faced by States are not well understood. If this cannot be resolved, we recommend that the Disability Services assessments (both State schemes and NDIS) be discounted.
- We do not consider that Commonwealth Budget projections will be reliable enough to use to backcast DisabilityCare arrangements.

At this stage, the data sources for measuring disability services demand include Commonwealth pension beneficiaries and data from the ABS Survey of Disability, Ageing and Carers. Both data sources are problematic.

- Commonwealth disability support pensions have been provided on a basis that has been less than transparent and does not clearly relate to State service demands.[1] The number of persons aged 16 and over in receipt of 2009 National Disability Agreement services is less than 20% of the number of disability support pensioners.
- The ABS survey is affected by lack of sampling in very remote areas and many indigenous communities, and is possibly affected by perceptions relating to receipt of a disability support pension. The number of persons aged 16 and over in receipt of 2009 National Disability Agreement services is only about 25% of the number of persons aged 15-64 with profound/severe core activity limitation according to the 2012 survey.

The NDIS trials are also reported to be generating unexpectedly high demands, with media reports that the number of people registering their interest is about 50 per cent more than forecast.

---

[1] For suggestions that many people on a disability support pension should not be, see:
http://www.dailytelegraph.com.au/news/opinion/bailing-out-the-boat-with-a-broken-bucket/story-e6frezz0-1226614333813
http://www.theaustralian.com.au/news/the-disability-welfare-system-in-australia-is-broken/story-e6frg6n6-1226614493682
For examples of rorting of the disability support pension, see:
http://www.cando.org.au/updates?start=25 (article dated 23 December 2013)

Overall, we consider that disability service demands are not well understood, and if this situation does not improve then it would be appropriate to discount both proposed components of the Disability Services assessment (State schemes and NDIS).

The CGC stated in its Discussion Paper[2] that backcasting the DisabilityCare arrangements may be feasible if reliable data are available. We are concerned that this would use Commonwealth Budget projections. We do not support the use of uncertain projections for backcasting.

2 CGC 2013-07-S *Proposed Assessments*, page 90.

16. Housing

Key Points

- We support the Discussion Paper proposals to
  - assess public housing on a gross basis;
  - assess all first home owner assistance together; and
  - continue to assess a housing cost weight for Indigenous households.
- We question the appropriateness of using income as a housing demand and rental revenue capacity measure, given the lack of recognition of cost of living issues in the CGC's proposed assessment, and we are unsure about the quality of the rental income data. We are also considering the appropriateness of the 'households' measure of public housing use.
- We present evidence to justify a capital cost weight for Indigenous households.

We support the Discussion Paper proposals to:

- assess public housing on a gross basis, with separate assessments for expenditures and revenues;[1]
- assess all first home owner assistance, including tax expenditures, together on the basis of number of first home owners;[2] and
- assess a housing cost weight for Indigenous households.

However, we question the inclusion of an income factor to measure housing demand and rental revenue capacity, as no account is taken of the impact of cost of living on housing demand, and the data on rental income from low income Indigenous households appears high relative to low income non-Indigenous households. We are also considering the appropriateness of the 'households' measure of public housing use.

[1] CGC 2013-07-S, *Proposed Assessments*, page 92.

[2] CGC 2013-07-S, *Proposed Assessments*, page 107.

More detailed comments on aspects of the housing cost weight and capital cost weight for Indigenous households are below.

Recurrent Indigenous Costs

We support the Discussion Paper proposal[3] to continue to assess a housing cost weight for Indigenous households. The data reported by the Northern Territory is more than backed up by the SOMIH[4] data cited by the Discussion Paper[5].

As further support, the Western Australian Department of Housing has advised us that, for both 2012-13 and 2013-14 until the end of November, 57% of public housing evictions were Indigenous. This is over double the proportion of public housing tenants that are Indigenous (i.e. 23%).

Capital Indigenous Costs

We note the CGC's comment that to include an Indigenous cost weight in its proposed socio-demographic composition factor for public housing capital costs, States would have to provide evidence that houses for Indigenous tenants cost more to build.[6] As can be seen in Table 1, Western Australian public housing for Indigenous tenants has, on average, 2.81 bedrooms compared to non-Indigenous tenants at 2.16, or 30% more. This reflects the larger size of Indigenous households (which would also be reflected in higher maintenance costs).

This may underestimate the additional costs posed by Indigenous tenants, due to some Indigenous tenants being classified as non-Indigenous, which would tend to overstate the average number of rooms per house for non-Indigenous tenants.

Another indication of the higher Indigenous tenant household size is that the average number of bedrooms built in Western Australia under the National Partnership for Remote Indigenous Housing is 3.17.

---

3 CGC 2013-07-S, *Proposed Assessments*, page 95.

4 State-owned and managed Indigenous housing.

5 CGC 2013-07-S, *Proposed Assessments*, page 95.

6 Ibid, page 104.

Table 1: WA public households by bedroom size and Indigeneity[a]
30 June 2013

Bedroom Size	Non-Indigenous	Indigenous
Bedsitter	64	5
1	7,093	769
2	8,618	1,515
3	7,556	3,915
4	1,430	1,172
5	238	186
6	29	32
7	4	2
8	0	1
9	0	1
10	0	0
Total households	25,032	7,598
Average number of bedrooms[b]	2.16	2.81

Source: Western Australian Department of Housing

(a) It is not mandatory to declare Indigeneity so the number of Indigenous households may be understated.

(b) Calculated treating bedsitter as zero bedrooms.

We have attempted to assess the effect of different tenants on dwelling life span. This is problematic with regards to mainstream housing, as tenants with different characteristics may inhabit a dwelling over its life.

With regards to houses built under the National Partnership for Remote Indigenous Housing (where Indigeneity is obviously known), we only have reliable data from 2009-10. While several houses which have been built or refurbished since 2009-10 are being refurbished in 2013-14, the sample size is too small to quantify. In future years, refurbishments of houses built under this National Partnership, when compared to other public housing, may be a source of information on relative capital costs for Indigenous and non-Indigenous tenants.

For now it can be noted that tenants who are evicted would generally tend to be more damaging to their properties. Hence, eviction rates not only generate administrative costs but may be indicative of relative rates of property damage.

17. Services to Communities

Key Points

- Western Australia notes the CGC staff proposals on water and electricity subsidies. We are continuing to examine the drivers of water subsidies (including the impact of distance from communities to their water sources).
- As indicated in the *Mining Related Expenditure* chapter, we continue to support an assessment of expenditure on community amenities and development along the lines indicated in our July 2013 submission. We have responded to the CGC staff concerns with our proposal (which is based on population growth in regions of different remoteness, with possible adjustment to remove the impact of fiscal equalisation on growth).
  - We are also open to the use of simple indicators of relative costs in appropriate circumstances, such as growth in mining investment.

Water and Electricity Subsidies

We note the CGC staff proposals to combine the water and electricity subsidy assessments, and no longer recognise that water availability and quality have an impact on water subsidies. In addition, based on its analysis of our data, CGC staff consider that there is no warrant for an allowance to reflect the distance of communities from their water sources (but will continue to recognise subsidies to small communities).

While we understand the rationales used by the CGC staff, we have identified problems with its analysis of distance from water sources. That said, we accept that further analysis would be needed for the CGC to go beyond its current proposals, and we are therefore continuing to examine the drivers of water subsidies.

Community Amenities and Development

Our comments are reflected in the Key Points above.

18. Justice Services

Key Points

- The 50:50 split of police expenses between crime-related and community policing is incorrect. The distinction should be between crime-related policing and policing in a community of law-abiding citizens.
- The CGC has regularly argued that because police to population ratios are relatively consistent across States, there exists a 'base level' of resources provided to the population.
  - However, we have found that the data correlates well with the undiscounted police socio-demographic composition factor, clearly showing that crime propensity drives police staffing levels and expenses.
  - This conclusion is supported by much qualitative evidence.
- A number of considerations suggest that, while police custody data is not an ideal basis for assessing police service demands, it is unlikely to be overstating disabilities, suggesting that the current discount is unwarranted.
  - We seek advice from the CGC on the type of data that could assist the CGC's deliberations in this regard.

Crime-related versus Community Policing

The Commission applies disabilities to only 50% of police expenses because it considers the remaining 50% is driven by the population as a whole.

- Western Australia remains firmly of the view that the 50:50 split of police expenses between crime-related and community policing is incorrect.

We believe that it is inappropriate to make a distinction between specialised major crime squads and general policing.[1]

[1] See for example, CGC 2013-07-S *Proposed Assessments*, page 127, paragraph 69.

To properly determine drivers of police spending, the distinction should be between policing that has been influenced by population groups with a high propensity for crime (crime-related) and policing that would be required in a community of essentially law-abiding citizens.

- We consider that the latter would require minimal policing.

We regard policing for major crimes (that are serious enough to form specialised squads) to be a subset of crime-related policing. Our police tell us that most police expenditure is driven by 'volume crimes' such as assault, break and enter, theft, disorderly conduct and driving offenses (committed by the high-use groups identified by the CGC).

In the 2010 Review Report,[2] the CGC contends that, based on State submissions and discussions with senior police, police staffing allocations are not influenced by crime rates alone, but a large number of factors, including policy decisions.

- However, that States follow different policies should not be surprising or an impediment to the assessment. It is appropriately dealt with under HFE through a calculation of average expenses.

Police activity influences

In considering the drivers of police expenses in the 2010 Review Report,[3] the CGC states that broad community safety, support and crime prevention are forms of policing driven by population. We contend that many aspects of this police work are influenced by high-offender groups.

- We acknowledge that expenses relating to anti-terrorism, and non-offence emergency management and missing persons are driven by population, but consider that these form a small proportion of police expenses.

Community safety and support

Several aspects of community safety and support activities are heavily influenced by crime or high-offending groups. The following activities fall under this category, all of which are overrepresented by young males and Indigenous people:

---

2 CGC 2013-07-S *Proposed Assessments*, Chapter 16, paragraphs 29-30.

3 2010 Review Report, page 319, paragraph 25.

- responding to incidents – the vast majority would be traffic incidents and criminal incidents;
- crime control – deterring and detecting drug, alcohol and speeding offences;
- providing a visible police presence – driven by the propensity for crime, where the presence is greater in areas that contain known hotspots. WA Police advise that 'walking the beat' is a form of crime prevention and mitigation, where officers make an effort to instil a rapport with known recidivist offenders;
- liaising/partnering with the community – similar to a police presence, WA Police inform us that community policing operates through a local Sergeant who knows the 'beat', is in close contact with the community, and can readily profile and target known local offenders when provided with intelligence about crimes;
- maintaining public order, controlling the use of public space, and upholding public safety – involves reducing anti-social behaviour (including vandalism and noise complaints) and crime;
- attending public events – we acknowledge that all demographic types attend public events, but the police presence (and expense) is much enhanced at events that attract a demographic that is more likely to commit anti-social behaviour and crime;[4]
- water police and search and rescue – although a wide range of the population may require services from the water police and search and rescue squads, WA Police inform us that young males (and Indigenous people to a lesser, but still overrepresented extent) are high users of these services (although not necessarily from a criminal perspective);
- providing information – mostly relates to criminal information (e.g. Crime Stoppers) and missing persons (some of which are linked to crime); and
- education programs – includes driver education programs and crime deterrence initiatives (either targeted at potential offenders or community safety initiatives, e.g. Neighbourhood Watch).

---

4 In our February 2009 submission, we provided what we consider to be credible examples of a nightclub district compared to an average suburb, and the 'Big Day Out' to Leeuwin Estate Winery Concert.

Crime prevention

Police efforts at crime prevention are heavily influenced by crime and high-offending groups.

- An aspect of crime prevention is to reduce the opportunities to commit crime, which would occur in more crime-prone areas. WA Police refer to this in their Crime Prevention Strategy[5] as situational crime prevention, which includes "increasing surveillance in public places" and educational campaigns.
  - Those without a propensity to commit crime (generally those outside the identified high-use groups) will not be influenced by such activity. The target is the individual most likely to commit the crime.
- That crime prevention costs are influenced by the drivers of crime, rather than by unweighted population, is further borne out in the WA Police's Crime Prevention Strategy.
  - The Commissioner's message (prefacing the strategy) states that it is closely linked to the WA Police Intelligence Model, and refers to "priority crimes, hotspots or other needs" being identified.
  - The strategy itself states that "Crime prevention is about understanding and addressing both the cause and the crime", and refers to "police often returning repeatedly to the same place (hot spots), dealing with the same individuals or same types of crime".
  - The strategy lists priority crimes such as volume crime, alcohol and drug related crime, family and domestic violence, anti-social behaviour and graffiti. It recognises within this context that the priority groups disproportionally represented include young people, Aboriginal people and 'Prolific and Priority Offenders'.
- Crime prevention strategies are therefore explicitly conscious of patterns affected by crime drivers.

---

5 http://www.police.wa.gov.au/LinkClick.aspx?fileticket=ycQdhjG66NM%3D&tabid=1525

- It is not only WA Police who take this approach.
  - The Australian Institute of Criminology claims in the National Crime Prevention Framework,[6] that:
    - "Crime prevention can reduce the long term costs associated with the criminal justice system and the costs of crime" (page 3);
    - "The international trend is towards a comprehensive approach to crime prevention, and there is a growing recognition of the characteristics of effective programs that must be adapted to specific circumstances" (page 3);
    - A comprehensive crime prevention strategy will incorporate three approaches: strengthening institutions that support civil society; targeting high risk settings or identifying early and subsequently intervening in the lives of people or groups at risk of engaging in criminal activity; and targeting the prevention of recidivism among those people who have already engaged in offending behaviour (page 4); and
    - "these problems vary across communities and locations within each jurisdiction" (page 15).
  - The following extract is from the New South Wales Crime Prevention Strategy (page 1):[7]

    "Research into patterns of crime has shown that crime is not simply a function of where people live but reflects the opportunities for crimes to occur.

    Crime is more likely to occur in some places rather than others (hotspots) and at some times more than others (e.g. alcohol related assault is more likely on Friday and Saturday nights and break and enters are more likely during weekdays). Crime is also more likely to be committed against some people more than others (e.g. repeat victims), and against some things more than others (such as stealing items that are easy to sell).

---

6 http://www.aic.gov.au/media_library/aic/ncpf/ncp_framework.pdf

7 http://www.crimeprevention.nsw.gov.au/agdbasev7wr/_assets/cpd/m660001l2/guideline_for_developing_a_crime_prevention_plan.pdf

Our research and experience shows us that effective crime prevention and reduction measures target these factors specifically.”

- The strategy describes the first key stage in developing a crime prevention strategy as developing a crime profile “will allow you to get a clear idea of the types of crime affecting your area and help you to determine what type of crime will be the focus of your strategy”.
- The local police “can complement this data with details of key locations for crimes within the LGA8; the factors that contribute to the occurrence of the crime; and a profile of who is involved in this crime, considering both offenders and potential victims”.
- Police can then consult with the community and “utilise existing community and service provider networks and interagencies to gain a broad perspective on the factors contributing to crime in the area”.

Analysis of police staffing ratios

The CGC has regularly argued that because police to population ratios are relatively consistent across States, there exists a ‘base level’ of resources provided to the population, topped up with extra resources based on the high-user groups.[9]

- However, we present in Figure 1, for each jurisdiction, the ratio of police staff relative to the national average with the undiscounted police socio-demographic composition (SDC) factor (averaged over 2006-07 to 2010-11).
  - Results show that for all jurisdictions other than South Australia and the Northern Territory, police expenses are highly correlated with their SDC disabilities (the data points are co-located).

[8] Local Government Area.

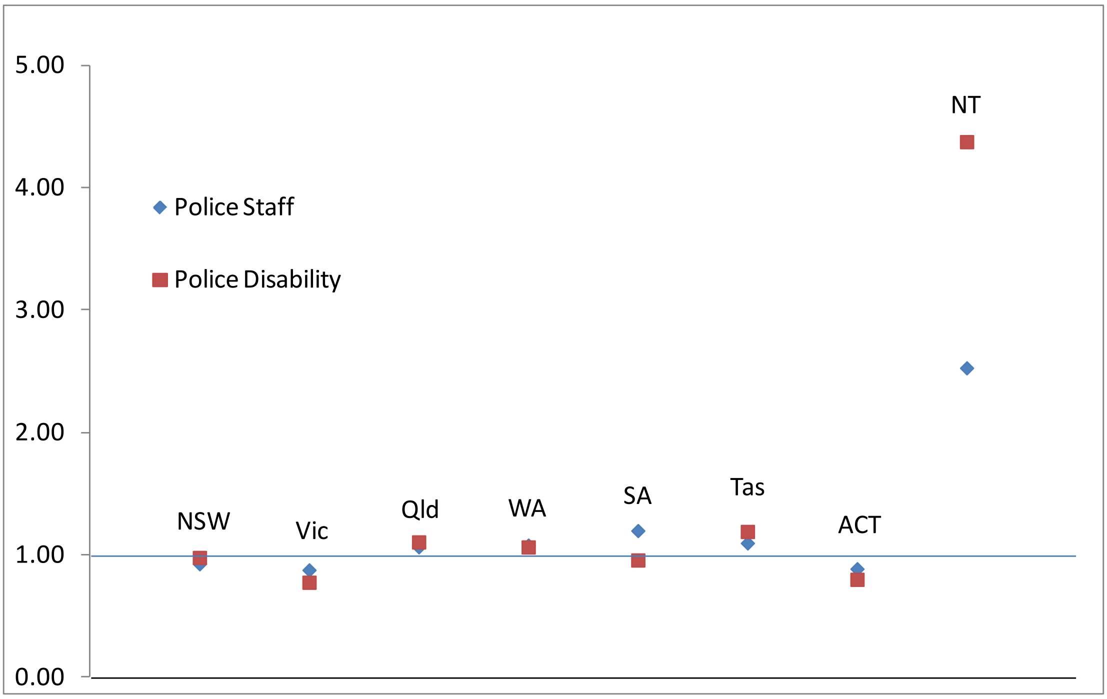
[9] 2010 Review Report, Table 16-4 and CGC 2013-07S Table 17-1.

 - Although the CGC regard the Northern Territory as being the outlier (having a much higher police to population ratio than other jurisdictions),[10] it is in fact the least well staffed jurisdiction, with its police force seemingly swamped by a large population of those from high-offending groups.

 - The variation between staffing and SDC disabilities for the Northern Territory and South Australia, and slight variations in other States, can be attributed to State policy. However, the CGC assessment is based on standard policy, which can be seen to closely align with the undiscounted SDC factors.

- In summary, Figure 1 clearly shows that the driver behind police staffing levels and expenses is a jurisdiction's socio-demographic composition.

Figure 1: Police staff and disability factors, by State average 2006-07 to 2010-11



Source: Calculated by Western Australian Treasury from CGC data. Police disabilities are calculated from the CGC simulator model by setting a 100% expense weight for general policing.

---

10 CGC 2013-07S, p.127, para.72

Police Custody Data

Although we understand the reasons behind discounting the police custody data (because it is a one month survey, does not capture activities that do not involve taking people into custody and may not adequately capture differences in complexity of crime incidents), we doubt that the data is overstating disabilities.

WA Police advise that less serious high-volume crime requires considerable police effort, yet is less likely to be solved (e.g. break and enter), and less likely to result in custody.

In addition, for anti-social behaviour, police are moving to policing models where warnings and move-on notices are given where possible. On-the-spot police orders or fines are becoming more common. This work does not lead to custody and so does not show up in the data, but is increasing in frequency.

- Our police suggest that Indigenous people are heavily represented in that wider police work. The volume of Indigenous misdemeanours that do not show in the custody data would likely offset any bias due to complexity issues.

In our July 2013 submission, we noted that successful police efforts in crime prevention and mitigation are reducing the prevalence of offender groups in custody data.

- However, the CGC staff considered that, without supporting data, this argument is not persuasive enough.

- We seek advice from the CGC on the type of data that could assist the CGC in this regard.

19. Roads

Key Points

- As discussed in the *Physical Environment* chapter of this submission, we believe that the consultant's report does not form an appropriate basis for assessing road maintenance or capital disabilities.

- As discussed in the *Transport Infrastructure* chapter of this submission, we believe that the CGC should cease assessing disabilities based on Commonwealth capital payments for national network roads, as the conceptual case for such disabilities has not been demonstrated.

20. Transport

Key Points

- For urban transport recurrent subsidies, we recommend one of:
  - an EPC assessment; or
  - an assessment of a per capita subsidy that increases with population size only for small cities (say up to 1,000,000 population).
- We welcome the CGC's recognition that non-urban transport subsidies are influenced by dispersion.

Urban Transport

The CGC has decided that urban transport public non-financial corporation operations should be assessed as if they are part of the general government sector.[1]

The Discussion Paper proposes that:[2]

- urban transport investment and depreciation be assessed as part of the general Investment and Depreciation categories (we address this in the *Transport Infrastructure* chapter of this submission); and
- recurrent subsidies to urban transport operators be assessed in the same way as the 2010 Review. This involved regressing per capita subsidies against city size, resulting in higher assessed per capita subsidies for larger city sizes.

We have a number of concerns about the proposed recurrent assessment.

---

[1] CGC 2013-05 *Equalisation Objectives and Supporting Principles*, page 5, paragraph 20.

[2] CGC 2013-07-S *Proposed Assessments*, page 136.

Conceptual concerns

We have the following conceptual concerns with the proposed recurrent urban transport assessment.

- The proposed assessment is a purely empirical relationship between recurrent transport subsidies and population size. It is not based on any causal disability analysis of operating expenses and revenues.
- The assumed positive relationship between population size and per capita recurrent transport subsidies (on a standard policy basis) is not intuitively plausible for large cities, given the advantages they should be able to derive from high passenger demand and high revenue raising capacity due to congestion.
- It is simplistic to assume that only city population size affects per capita subsidies, as population density and urban form also have an impact.

Concerns about the regression analysis

Even if we disregard the above conceptual concerns, we do not believe that the regression analysis used by the CGC is reliable.

Use of data from United States of America (USA)

The Discussion Paper seeks to justify the log curve that is fitted to the Australia data, by fitting a similar curve through USA data (for which far more data points are available).[3] The USA curve is then scaled up by the average ratio of the average USA subsidy to the average Australian subsidy, and shown to be visibly almost indistinguishable.

We have two main problems with this analysis.

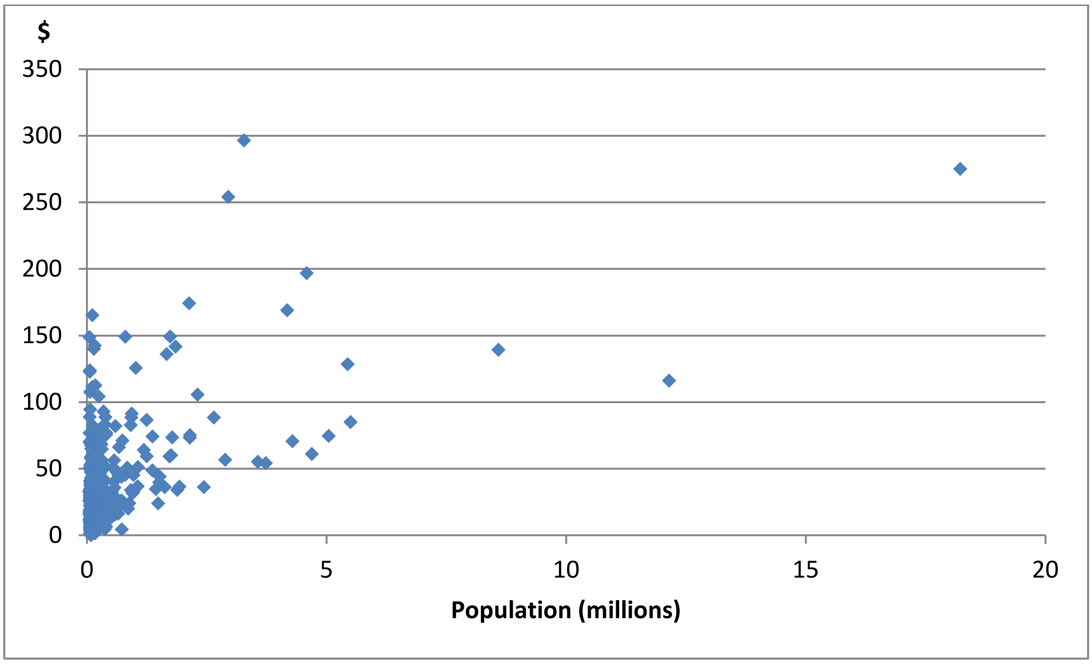
Firstly, for any two curves of the form that have been fitted ($y = a \ln(x) + b$), if one curve is scaled to match the average value of the other curve, then the results will be two curves that are visually indistinguishable (as long as the constant terms are not orders of magnitude different). In addition, why is it appropriate to scale the USA curve to match the Australia curve?

Secondly, the USA data do not justify the fitting of a log curve. This can be seen by considering the actual USA data, shown in Figure 1 below.

[3] CGC 2013-07-S *Proposed Assessments*, page 137.

- There is no visual relationship to a log curve.
- The R-squared value for the assumed log curve is very low (0.22).

Figure 1: USA Per Capita Subsidies



Source: US National Transit Database, provided by CGC

- Removing the most significant outlier[4] reduces the R-squared to just 0.19 (and a linear fit is not significantly better, with an R-squared of 0.22).
  - Aside from the fact that such a low R-squared value cannot be used to justify the functional form, the fact that removing a single data point (out of 368 data points) reduces the R-squared value by such a degree further highlights the lack of any evidence to support the relationship.
- Removing additional outliers reduces the R-squared value even further. In fact, removing just four outliers reduces the R-squared down to just 0.15, providing no evidence to support the presumed functional form.
- There is significant clumping along the vertical axis indicating that costs for small populations can vary dramatically.
  - Some of the highest per capita subsidies are among the lowest populations.

[4] Data point located at (18.2,275)

Fitting of Australian data

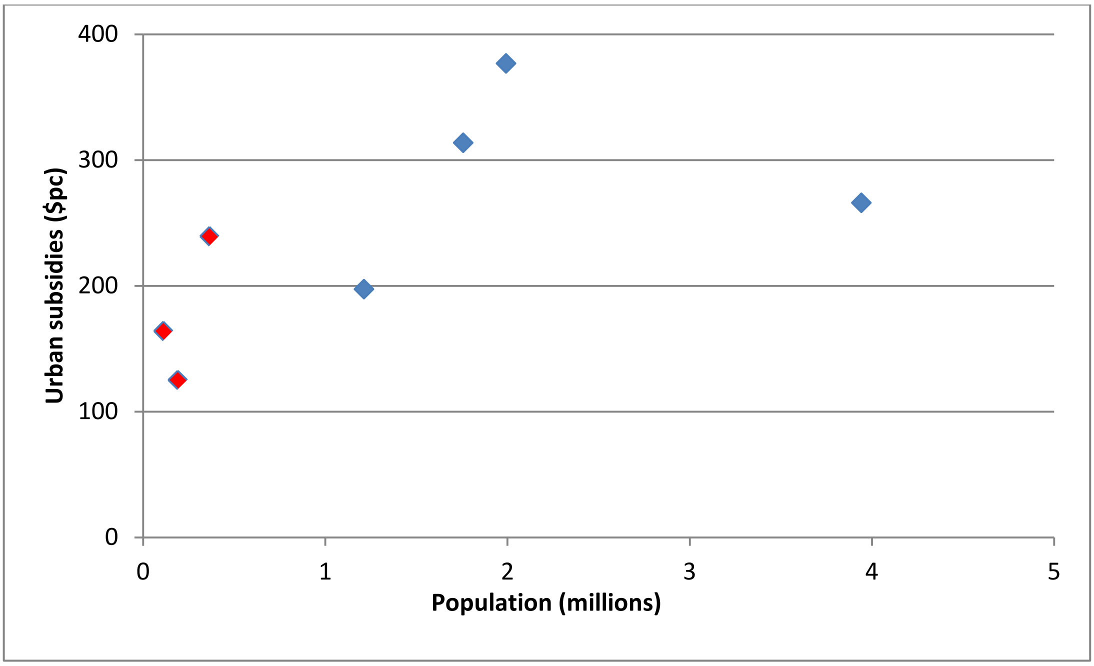
Like the USA data, the Australian data shows considerable clumping for lower population sizes. Among these lower population sizes, there is some basis for increasing per capita subsidy for increasing population size, but the relationship is very weak.

However, there is no reason to fit a smoothly increasing curve through both the smaller population centres and the larger capital cities.

The basic problem is that, for larger population sizes, there is only one city in each State. These cannot be directly compared without an understanding of the expenditure and revenue raising policies of States in relation to these cities.

For example, as shown in Figure 2, without the Sydney data point (or if that data point were lower under average policy), it would be quite valid to fit a horizontal line through the larger capital city data points (i.e. population above 1,000,000).

Figure 2: Capital Cities Excluding Sydney



Source: Reserve Bank of Australia, provided by CGC

Urban transport conclusion

Based on the above, we conclude that the case for the existing assessment of recurrent urban transport subsidies is very weak.

Therefore, we recommend one of three options:

- an EPC assessment; or
- an assessment of a per capita subsidy that increases with population size only for small cities (say up to 1,000,000 population) .

Non-Urban Transport

We welcome the CGC staff's recognition that subsidies for non-urban transport will vary not only with non-urban population but also with the extent to which that population is dispersed[5].

We recognise the practicality of using an existing measure of dispersion, and consider rural road length (proposed by CGC staff) to be a reasonable option. Population density is an alternative.

---

5 CGC 2013-07-S *Proposed Assessments*, page 143.

21. Transport Infrastructure

Key Points

- We do not support an assessment of urban transport per capita asset values increasing with population size based on the currently observed relationship between population size and asset values, as the relationship:
  - depends upon policy-affected, potentially inaccurate and single time point data; and
  - is sensitive to planned expansion of Perth urban transport.
- We are comfortable with the proposal to assess depreciation as part of operating expenses. However, interest expenses should be excluded from operating expenses due to the substantial policy influences.
- We do not support discounting of Commonwealth payments on the basis of "national significance" as that cannot be meaningfully defined (we would support a general discount to all State revenues, including Commonwealth payments).
- We believe that the CGC should cease assessing disabilities based on Commonwealth capital payments for national network roads, as the conceptual case for such disabilities has not been demonstrated.

New Transport Infrastructure Assessment

The Discussion Paper proposes that[1]:

- asset stocks for urban transport investment be assessed (for capital cities and their main satellites only) by fitting a linear relationship between per capita asset value and city size - with this relationship frozen (rather than updated every year); and
- urban transport depreciation be assumed to be proportional to recurrent subsidies.

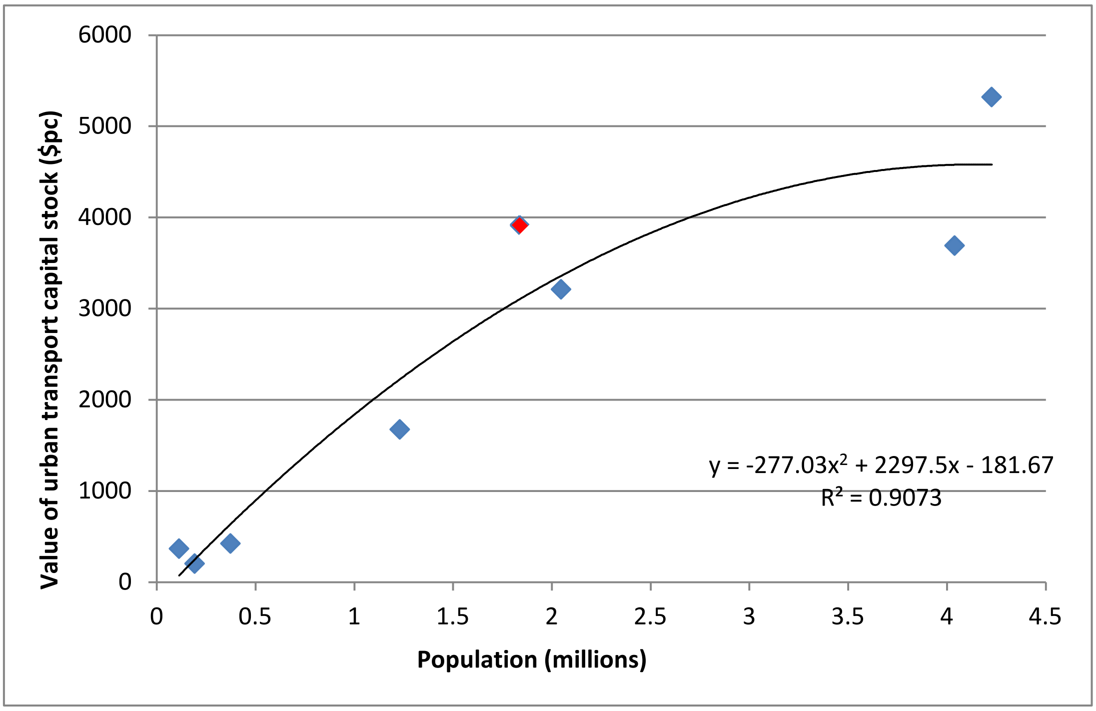
[1] CGC 2013-07-S *Proposed Assessments*, pages 146-153.

Consistent with our discussion of recurrent subsidies in the *Transport* chapter of this submission, we are concerned that the proposed linear relationship between per capita asset values and city size is potentially driven by differences in States' policies and timing of investment decisions.

In this regard, we note that Western Australia is planning to significantly expand its urban transport system with the addition of the MAX Light Rail and Airport Rail Link projects. This will add an estimated $3.9 billion to the value of Perth urban transport assets.

The two figures below illustrate what a quadratic relationship would look like if adjusted data for Perth were used (i.e. including the MAX Light Rail and Airport Rail Link projects)[2], with and without the inclusion of the Sydney data point. We have used a quadratic relationship, as a linear fit no longer comfortably reflects the data.

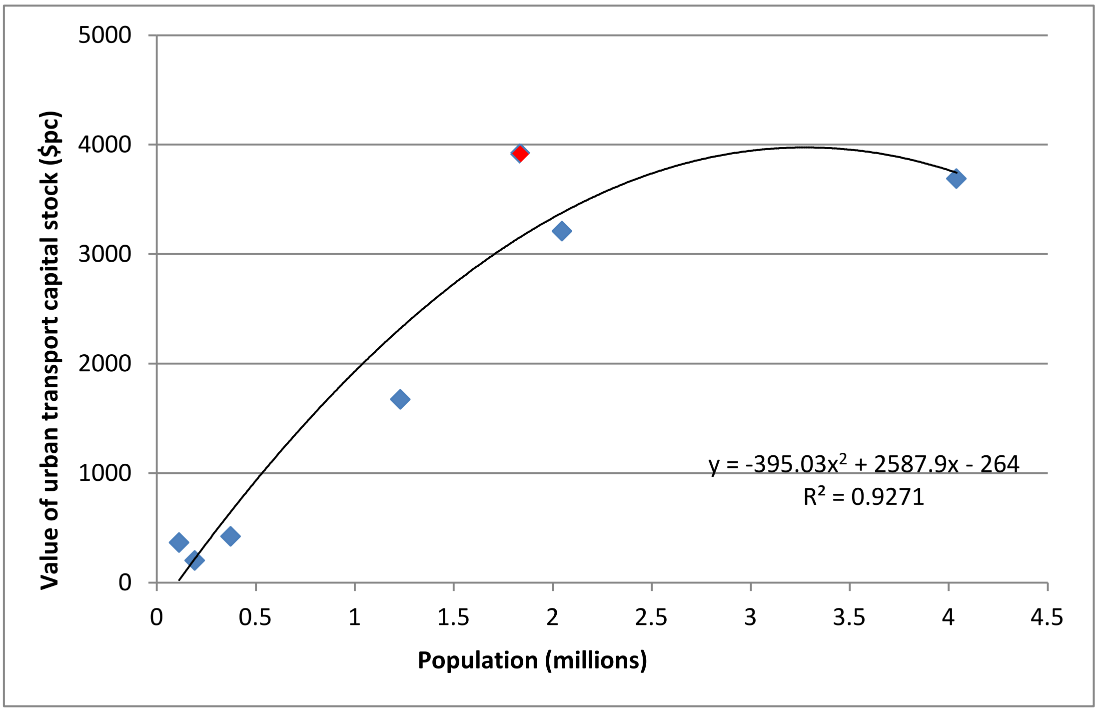
Figure 1: Weighted value of assets per capita, including Sydney



Source: CGC data.

[2] Indicated by the red data point in the charts.

Figure 2: Weighted value of assets per capita, excluding Sydney



Source: CGC data.

While we would not suggest a declining level of per capita assets at larger city sizes (this being an artefact of the quadratic fitting), it seems reasonable that for cities beyond a certain size, the value of urban transport capital stock per capita will begin to plateau.

At the very least, the sensitivity of the relationship to changes in the data points highlights the need to consider long-run rather than point in time relationships.

We are also concerned that the $3.3 billion asset value for Perth proposed in the Discussion Paper could be understated. We will liaise with CGC staff over this.

We are comfortable with the proposal to assess depreciation as proportional to recurrent subsidies (but note that we have substantial concerns about the assessment of recurrent subsidies, as covered in our *Transport* chapter).

Appropriate Treatment of Commonwealth Transport Infrastructure Payments

The terms of reference ask the CGC to consider the development of, if appropriate, a framework to identify payments for nationally significant transport infrastructure projects which should affect the relativities only in part and options for providing that treatment.

We believe that the inclusion approach is necessary to ensure no double counting between HFE and the allocation of direct Commonwealth grants.

We also do not believe that payments of “national significance” can be meaningfully defined, or that payments for transport infrastructure should be assessed differently from other payments. We do not even see a case for treating capital payments as different to recurrent payments.

However, we would support a uniform discount to all revenue assessments, including both own source revenues and Commonwealth payments, to improve policy neutrality and capture needs that the CGC cannot explicitly identify.

National Network Roads (NNRs)

The CGC currently assumes that the distribution of half of the Commonwealth capital payments for NNRs reflects spending disabilities that are not otherwise assessed.

The CGC has never provided any substantive explanation of the nature of these disabilities, which is major transparency problem.

Furthermore, the other disabilities that the CGC applies includes the length of NNRs and the traffic on NNRs, which raises the prospect of double counting.

We believe that there is no conceptual case for disabilities based on NNR payments. It is therefore inconsistent for the CGC to assess these disabilities, when it elsewhere requires, as a bare minimum, a conceptual case.

Therefore, we recommend that the CGC cease assessing disabilities based on NNR payments.

22. Services to Industry

Key Points

- As indicated in the *Mining Related Expenditure* chapter, Western Australia welcomes the CGC staff proposal to recommend a separate assessment for mining industry regulation in the Services to Industry category (presuming it satisfies the materiality threshold).
- We note that it is also proposed to net off mining user charges. We are investigating what these user charges comprise to clarify their appropriate treatment.

23. Mining Related Expenditure

Key Points

- Our July 2013 submission suggested approaches to quantifying Western Australia's mining related expenditure needs of up to $2 billion per annum.
- Our suggested approaches are in principle largely empirical, although with limited data we have had to make various assumptions. The CGC has the opportunity to gather data to improve the quantification.
  - We are also open to the use of simple indicators of relative costs in appropriate circumstances, such as growth in mining investment.
- We based certain aspects of our quantification of Western Australian needs on an assumed rather than actual population growth for Western Australia to reflect underlying need (i.e. population growth in the absence of resource allocation distortions resulting from deficiencies in fiscal equalisation).
  - The CGC can use actual population growth, although the remaining underlying need should be recognised elsewhere (perhaps as part of the discount applied to the Mining Revenue assessment).
- We believe that the CGC has gone down the wrong track in attempting to assess differences in costs between capital cities and regional areas. This is further discussed in the *Wages* and *Regional Costs* chapters.
- Substantial unavoidable (and currently unrecognised) cost pressures for growth States arise from the lumpiness of capital and the risk of stranded capital.
  - We recommend, as a reasonable estimate for both general government and trading enterprise infrastructure, calculating assessed investment using State populations that are increased by the last seven years' population growth (with an appropriate weight to reflect the higher value of growth infrastructure).
- We are continuing to examine what data is available on the use of State services by fly-in fly-out workers.

In our July 2013 submission to the 2015 Review, we presented a way forward to better assess mining related expenditure needs, through a combination of measures designed to recognise State expenditures that lead to economic benefits and increased revenue capacity.

We highlighted six issues that we believe deserve further exploration by the CGC. They are: the provision of infrastructure in advance of demand; support for community and local government amenities and development; regulation costs of development; using capital costs rather than the recurrent proxy; the cost of services for fly-in fly-out (FIFO) workers; and regional/remote dispersion costs. We provided indicative methodologies and estimates of above average costs faced by Western Australia.

We note that CGC staff appear potentially receptive to some of our arguments, but may not have fully understood others (particularly costs relating to in-advance infrastructure provision and community amenities). We have provided comments to assist the CGC staff in this regard.

We are happy to engage further with CGC staff on our proposals.

Provision of Infrastructure in Advance of Demand

In our July 2013 submission, we argued that, because of economies of scale in construction, States will build infrastructure to cater for future population growth (if they do not, they will incur even larger construction costs).

We also noted that an allowance is needed for the risk of stranded capital and inefficient capital utilisation due to the unpredictable nature of economic development. This risk is higher in Western Australia due to its reliance on volatile resource development.

For the GST Distribution Review, we quantified the additional cost that these factors would impose on Western Australia at $870 million, based on an economically desirable prospective population growth rate. We quoted this amount in our July 2013 submission to the 2015 Review, and provided a derivation of this estimate.

The Discussion Paper sought elaboration on how the impact of future population growth could be quantified on a historical basis.[1] The following comments address this.

[1] CGC 2013-07-S *Proposed Assessments*, pages 177-178, paragraphs 51-52.

The basic concepts are:

- larger scale infrastructure is cheaper to build, per person serviced, than smaller scale infrastructure;
- it is therefore worthwhile building for both current and future population growth at the same time (so growth infrastructure will not be fully utilised for a period of time); and
- once the infrastructure has been built, it will later be replaced, but infrastructure solely for replacement purposes will be fully utilised.

The proportion of a State's growth infrastructure that will not be fully utilised will be higher if it has a higher population growth rate.

A 1998 consultancy on behalf of the Western Australian Treasury[2] estimated (assuming a 4% real discount rate) that if a 1% increase in the scale of construction resulted in only a 0.75% increase in costs, then there is an optimal (i.e. cost minimising) 14-year period between episodes of new construction for a constant increase in population.[3]

- The length of the optimal period does not depend on the number of people added to the population each year, as long as this number is constant (it does depend upon the real discount rate and the size of the scale economy).
- Box 1 presents an algebraic derivation of this result.

In practice, States don’t synchronise the completion of their infrastructure projects to, say, 14 year cycles. While there are ups and downs, infrastructure projects are always going on, and for simplicity we assume a smoothed approach to infrastructure construction.

[2] J Petchey, P Shapiro, P Kenyon and P Koshy (1998), *A Net Present Value Premium for Lumpy Public Capital*.

[3] In practice, States may build growth infrastructure inefficiently, in which case the cost of growth infrastructure (and hence the disability faced by higher population growth States) will be higher.

On this basis, and assuming that a State always builds at the optimal scale, most of its actual population growth will be serviced by pre-existing infrastructure, but the prospect of further population growth will prompt the building of additional underutilised infrastructure. If we use the above example of a 14-year optimal period and assume that the same amount of growth infrastructure is built each year (servicing a relatively stable long-term annual increment in population numbers),[4] then growth infrastructure built within the last 14 years will be partly underutilised.

- Growth infrastructure built 14 years ago will be fully utilised.
- Growth infrastructure built 13 years ago will be one fourteenth unutilised.
- Growth infrastructure built seven years ago will be one half unutilised.
- Growth infrastructure built one year ago will be thirteen fourteenths unutilised.
- Growth infrastructure built today will be fully unutilised.

On average, growth infrastructure will be built to cater for 14 years of population growth, but will be half unutilised. Therefore, there will be at any time unutilised infrastructure catering for seven years population growth.

This unutilised infrastructure will be reflected in the national total infrastructure. For general government infrastructure,[5] as a simple approximation, the CGC can take account of this by adding to each State's population the growth in that State's population over the previous seven years, when calculating assessed investment (standard investment should still reflect actual populations).[6]

- A weighting factor should also be applied to the population increase, to recognise that newer capital is less depreciated (and hence has above average value).

---

[4] Infrastructure can be expected to be built each year as, for example, a hospital might be built in a different year to a school, or a school catering for growth in the southern suburbs might be built in a different year to the northern suburbs.

[5] This should include transport and housing infrastructure that the CGC intends bringing into its assessments.

[6] This is an approximation for two main reasons. Firstly, it does not take account of changes in use disabilities and capital deepening over the previous seven years. Secondly, population growth is not a constant number of persons each year (a better assumption would be a constant proportion of the population each year – we can provide mathematical modelling of this on request).

For trading enterprise infrastructure, similar considerations apply, as discussed in our July 2013 submission. Costs associated with advance provision of infrastructure are generally best financed through taxes (i.e. community service obligations for, or lower dividends from, trading enterprises) or quasi-taxes (i.e. user charges that spread the costs across a wider range of users rather than those in the growth areas, or reduced returns on trading enterprises). Attempting to recover these costs from migrating labour and capital is often impractical; creates inefficiency; and where attempted, increases costs for the economy (thereby in the long term reducing tax capacity and offsetting short term budget gains from shifting costs to users).

The following calculation is proposed (analogous to the calculation for general government assets, although taking into account that trading enterprise assets are not subject to an explicit infrastructure assessment, but rather an implicit assessment as part of the Net Lending assessment, which we assume will continue in its current form).

- We can calculate national utilised infrastructure per capita by dividing national infrastructure by the sum of national population and national population growth over the last seven years.
- Multiplying this per capita value by national population growth over the last seven years gives an estimate of the national value of unutilised infrastructure.
- An assessed unutilised infrastructure value for each State can be calculated by multiplying the national per capita value by that State's population growth over the last seven years.
- The assessed investment and assessed depreciation required by each State can be calculated from this assessed unutilised infrastructure value, in the same way as the general government capital assessments.

Box 2 describes the above process algebraically. (Analogous to the general government sector calculation, an adjustment should also be made to recognise that newer capital is less depreciated, and hence has above average value. For simplicity, this is not shown in the box.)

Box 1: Derivation of optimal construction period under scale economies

Assume the following:

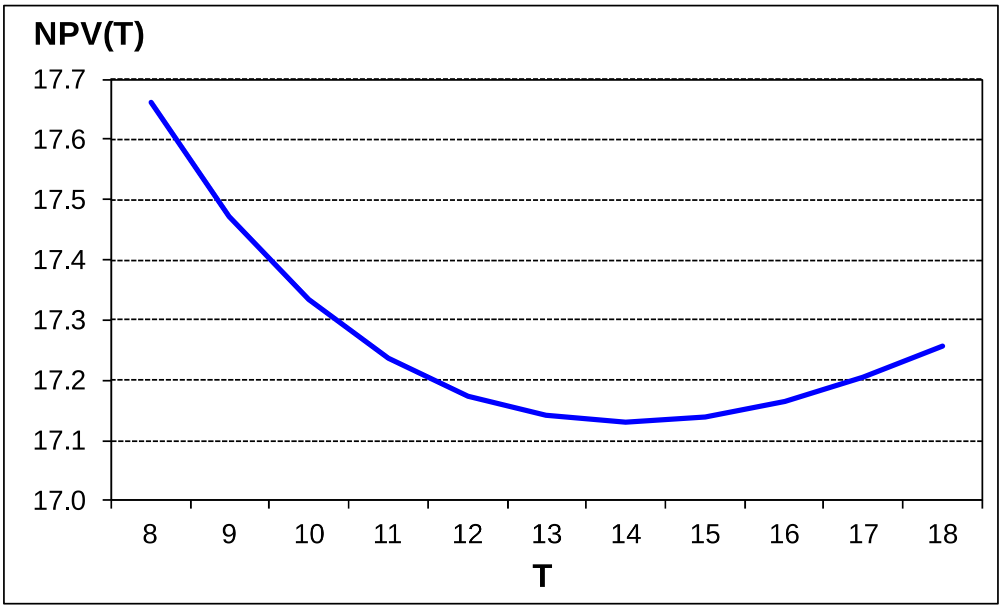
- Population grows by a constant number of people each year, denoted ***P***, and ***T*** is the number of years of population growth that will be catered for by the infrastructure when it is built.
- The number of projects is proportional to ***P*** and the size of each project is proportional to ***T***.
- There are economies of scale in construction, such that the cost of constructing each project is proportional to T^{λ}, where λ is less than one. (Total cost of construction equals kPT^{λ}, for some constant ***k***.)

Let ***r*** equal the real discount factor. Let β equal ***1/(1+r)***.

The optimal construction period will be the one that minimises the net present value (NPV) of construction, which is equivalent to minimising the following (factoring out ***kP***):

$$NPV(T) = \sum_{n=0}^{\infty} \beta^{nT} T^{\lambda} = \frac{T^{\lambda}}{1-\beta^{T}}$$

For λ equals 0.75 and ***r*** equals 4%, a chart of NPV(T) is as follows (with minimum at ***T*** equals 14):



Box 2: Assessment of unutilised non-general government infrastructure

For this description, we assume than each State holds unutilised infrastructure to cater for seven years population growth. We use the following notation:

K_t = national value of infrastructure at start of year t

c = asset price inflation

NCE_t = national new capital expenditure in year t = $K_{t+1} - (1+c)K_t$

P_t = national population at start of year t

ΔP_t = growth in national population over seven years prior to year t

$\Delta P_{i,t}$ = growth in State i population over seven years prior to year t

U_t = national value of unutilised infrastructure at start of year t

$U_{i,t}$ = State i assessed value of unutilised infrastructure at start of year t

We can calculate U_t and $U_{i,t}$ as follows:

$$U_t = \frac{\Delta P_t}{(P_t + \Delta P_t)} K_t \qquad U_{i,t} = \frac{\Delta P_{i,t}}{\Delta P_t} U_t = \frac{\Delta P_{i,t}}{(P_t + \Delta P_t)} K_t$$

Assessed investment expenditure on unutilised assets for State i is then given by:

$$\begin{aligned}
& U_{i,t+1} - (1+c)U_{i,t} \\
&= \frac{\Delta P_{i,t+1}}{(P_{t+1} + \Delta P_{t+1})} K_{t+1} - (1+c)\frac{\Delta P_{i,t}}{(P_t + \Delta P_t)} K_t \\
&= \frac{\Delta P_{i,t+1}}{(P_{t+1} + \Delta P_{t+1})} K_{t+1} - \frac{\Delta P_{i,t}}{(P_t + \Delta P_t)} (K_{t+1} - NCE_t) \\
&= \left(\frac{\Delta P_{i,t+1}}{(P_{t+1} + \Delta P_{t+1})} - \frac{\Delta P_{i,t}}{(P_t + \Delta P_t)} \right) K_{t+1} + \frac{\Delta P_{i,t}}{(P_t + \Delta P_t)} NCE_t
\end{aligned}$$

Standard investment expenditure is calculated by taking each State's unadjusted population share of the national total of the above assessed amounts.

Support for Community and Local Government Amenities and Development

In our July 2013 submission to the 2015 Review, we proposed an approach to recognise the need for Western Australia to fund community amenities driven by economic and population growth (and its inherent uncertainty that discourages private investment).

In the Discussion Paper,[7] CGC staff note the following (in each case we have provided comments).

- History suggests the private sector supports mining communities more rather than less.
  - Private sector support is complementary to the substantial support that the Western Australian Government has provided.
  - In our experience, companies have a preference for providing high profile low cost kinds of infrastructure such as pools and sporting grounds, and can overdo the provision of these kinds of facilities, leaving communities with the cost of maintaining them. There is a tendency for essential but less PR-friendly infrastructure needs to default to the Government.
  - In cases like Port Hedland, the cumulative effects of multiple resource developments are driving infrastructure development. It is difficult for the Government to negotiate reimbursement or provision from companies because it is difficult to sheet costs home to any company in particular.
  - In limited cases, like Onslow, where there is substantial growth in town infrastructure attributable to a single very large project, and economic conditions allow it, the State can negotiate some significant contributions to public infrastructure. However, additional costs are incurred through the need to improve standards (reflecting both community and company requirements – for example, companies require hospitals to be at a certain standard) and to meet project timeframes (which puts general pressure on costs).
  - The old mining company towns have had to be normalised and infrastructure upgraded to acceptable standards.

[7] CGC 2013-07-S *Proposed Assessments*, page 124, paragraph 61.

  - We consider that the CGC does not need to consider company contributions in its assessments. As noted above, these contributions are ad hoc and need to be seen in the context of States' own substantial assistance to industry that is unassessed by the CGC.

- **Actual** population growth in **relevant** communities would be more appropriate than our proposal.

  - We note that one reason for the relevance of the growth factor is that much support is provided for the purchase of assets.

  - Our proposal was based on an assumed rather than actual State-wide population growth, to reflect underlying need (i.e. population growth in the absence of resource allocation distortions resulting from deficiencies in fiscal equalisation). However, the **distribution** of population growth within the State and within Australia was based on actual population growth in regions of different remoteness. The CGC can use actual State population growth if it considers this more appropriate, although in some way the remaining underlying need should be recognised (perhaps as part of the discount applied to the Mining Revenue assessment).

- Growth in capital cities is unlikely to be related to community development and amenities expenses.

  - We have in fact assumed a low, but non-zero, expense weight for growth in capital cities. Government grants for community assets are likely to be greater in population centres where population growth dilutes the per capita level of such assets.

We note that, while the proposed assessment presented in our July submission was based on the limited data available to us, our approach to this assessment is in principle largely an empirical one, which should be supportable through a data request. Such a data request would ascertain levels of State government expenditure on community amenities and development in various regions of Australia with different attributes of remoteness, growth and economic volatility.

We are also open to exploring the CGC staff proposal to use growth in mining investment as an alternative indicator.

Regulation Costs of Development

See our comments in the *Services to Industry* chapter.

We are also working with agencies on the CGC's data request relating to regulatory expenses associated with investment projects.

Using Capital Costs rather than the Recurrent Proxy

We support the CGC considering the use of Rawlinsons data to measure capital specific cost differentials (refer to the *Infrastructure* chapter of this submission).

FIFO Workers

We note that the CGC has acknowledged that there may be a conceptual case that States with a large number of FIFO workers face material unassessed expenses, but data is needed to assist the CGC in evaluating the case. We are continuing to examine what data might be available.

Regional/Remote Dispersion Costs

Our July 2013 submission proposed that the CGC recognise the very high costs of providing services in Western Australia's remote areas, particularly reflecting high accommodation costs.

We have major concerns with the approach proposed by CGC staff to recognise Western Australia's high regional costs. These concerns are discussed in detail in the *Interstate Wages* and *Regional Costs* chapters, but in summary are as follows.

- The proposal to also provide additional funding to States whose regional costs are less than in their capital cities undercuts the proposed allowance for Western Australia's high regional costs, is contrary to the principle of fiscal equalisation, and is based on analysis whose reliability cannot be ascertained.

- The proposal does not capture the very costs that Western Australia is seeking compensation for (i.e. employer funded accommodation costs and additional leave entitlements), as these costs are not captured by the data (from the ABS Survey of Education and Training) used by the CGC.

Recognising the Impact of State Mining Industry Development Policies on the Mining Revenue Base

The impact of past and current State mining industry policy on the mining revenue base is discussed in the *Mining Revenue* chapter.

24. Other Expenses

Key Points

- All revenues from the Commonwealth for natural disaster relief must be brought to account at some stage (recognising that both advances and lagged payments occur).
- We believe that the CGC should assess national parks and wildlife expenses using factors derived from assessed protected areas, which would be:
  - actual protected areas for Tasmania and the ACT; and
  - the average aggregate proportion of State area protected for the other States.

Natural Disaster Relief

The 2012 Update terms of reference required that advances from the Commonwealth for natural disaster relief should not affect the relativities.

To achieve equalisation, consistent with this terms of reference, the CGC must reallocate these advances to years in which the expenses that they fund occur.

The CGC may also have to assess negative expenses in cases where revenues are paid with a lag by the Commonwealth.[1]

The important principle is that all payments from the Commonwealth must be included in the assessments at some stage.

This requires an extra degree of quality assurance, which examines not just the latest assessment year, but also previous assessment years, to ensure that all payments are captured over time.

[1] For example, Queensland's 2013-14 Budget Paper No.2, page 10, projects payments in excess of expenses in 2014-15 and 2015-16.

National Parks and Wildlife

The Discussion Paper[2] notes that:

- States are now reporting national park areas on a consistent basis; and
- all States have agreed to a target of 17% of the continent to be protected.

States have made varying degrees of progress towards this 17% national target. However, an assessment does not require uniform policy – it merely requires the average policy to be measurable.

The protected areas of Tasmania and the ACT are clearly heavily influenced by the Commonwealth. While those States may have some policy influence, the most reliable measure of policy neutral protected area for those States is probably their actual protected areas.

The other States in aggregate had 13.2% of their area protected in 2010. This percentage could be applied to each State''s area to estimate a standardised protected area. It will presumably rise to at least 17% over time.

We believe that the CGC should assess national parks and wildlife expenses using factors derived from each State's assessed protected area. The CGC should also apply location factors, and could also apply any other factors (e.g. Indigenous cost weights) that it considers appropriate.

Notwithstanding the above, the CGC should also continue to consider our arguments about community amenities impacted by population and economic growth in our July 2013 submission to the 2015 Review, as discussed in the *Mining Related Expenditure* chapter. Population growth impacts on the need for establishing and protecting park areas.

[2] CGC 2013-07-S *Proposed Assessments*, page 183.

25. Infrastructure

Key Points

- It is clear to us that there is no double counting between the Depreciation and Investment assessments.
- We support examination of Rawlinsons data for capital specific cost factors. We believe that this would also cover physical environment and urbanisation disabilities, to the extent that these are significant.
- We agree that no assessment is required for intrastate migration, as it would be immaterial.
- We support using asset values to weight asset stock disabilities.

Alternative Presentation

The Discussion Paper seeks States' views on whether an alternative presentation (combining the Depreciation and Investment categories) would make it clearer that there is no double counting between these categories.[1]

- It has always been clear to us that there is no double counting.
- We are ambivalent about the alternative presentation.

Capital City Building Costs

We support the CGC considering the use of Rawlinsons data to measure capital specific cost differentials. However, we note that Table 24-3 and Figure 24-1 in the Discussion Paper[2] appear to give quite different results. This will require further examination.

As discussed in the *Physical Environment* chapter of this submission, we understand that Rawlinsons data does cover physical environment impacts, although the scope of these may need clarification.

---

[1] CGC 2013-07-S *Proposed Assessments*, page 190.

[2] CGC 2013-07-S *Proposed Assessments*, pages 195-196.

As the Discussion Paper notes, the Rawlinsons data would also capture some urban influences, although we are not aware of any evidence to support a disability factor for the urban influences claimed by Victoria.

Intrastate Migration

We agree with the Discussion Paper[3] proposal that the CGC not assess intrastate migration as the results would not be material.

At the November 2013 telepresence meetings, one State suggested that older capital cities are more costly because of infill development. However, all States are implementing infill in their capitals in order to limit urban sprawl (which arises from population growth). Most States have an explicit target for the proportion of the growth in their capital city population that will be housed through infill developments.[4]

Combining Disabilities

To calculate disability factors for the aggregate asset stock, the CGC weights disabilities for each function (e.g. schools education). Currently, the CGC uses depreciation for each function as the weights. However, the Discussion Paper[5] proposes replacing this with asset values (as depreciation will vary with asset life).

We support this proposal.

Roads Investment

The Discussion Paper has sought data on rural roads investment and roads to centres of economic activity. We are seeking this information from Main Roads Western Australia.

---

[3] CGC 2013-07-S *Proposed Assessments*, page 199.

[4] A discussion of this can be found in *Made in Australia: The Future of Australian Cities* by Richard Wellerand and Julian Bolleter (UWA Publishing).

[5] CGC 2013-07-S *Proposed Assessments*, pages 200-201.

Other Issues

We note that the Infrastructure assessment does not cover grants to third parties for infrastructure. We believe this should be addressed through the recognition of a population growth factor in the assessment of community amenities expenses (see further the *Mining Related Expenditure* chapter).

26. Net Lending

Key Points

- We support the Discussion Paper[1] proposals to:
  - retain the Net Lending assessment regardless of materiality (as it is an integral part of a broader population growth disability);
  - not make allowances for differences in the revaluation of assets (as there is no evidence for this);
  - not make allowances for differential borrowing costs (as it would not be material); and
  - remove the 25% discount from the Net Lending assessment (as it implies higher population growth States can achieve higher rates of return on their financial assets, which is unjustified).

1 CGC 2013-07-S *Proposed Assessments*, Chapter 25.

27. Indigeneity

Key Points

- We support the CGC's intention to measure Indigenous socio-economic status (SES) using data on Indigenous people only.
- We consider that either using the existing Indigenous Relative Socio-Economic Outcomes (IRSEO) measure or developing a tailored Indigenous Socio-Economic Indexes for Areas (SEIFA) would be step forward.
  – We do not, at this stage, have a preference between those options.

28. Administrative Scale

Key Points

- We support the proposal to continue to index the existing Administrative Scale assessed expenses, using the ABS State and local government final consumption expenses deflator.

The Administrative Scale assessment is intended to capture a 'minimum' fixed cost that would be incurred by any State on administration, regardless of population size. The CGC estimated this cost from data provided by States in the 2004 Review, and the results have been indexed since then.

The CGC staff have considered re-estimating administrative scale costs by either:[1]

- collecting State departmental data; or
- using publicly available data to estimate fixed costs, including through a regression approach.

CGC staff used the Data Working Party process to investigate approaches to collect data from central and service agencies to update the quantum of administrative scale expenses. However, no State was able to provide data.

The publicly available data gave mixed results and there were various concerns about the appropriateness of the data. The CGC staff considered that a regression analysis of Productivity Commission data on out-of-school staff versus student numbers provided some support for the existing estimate of fixed costs.[2] However, although we do not wish to dispute the existing estimate of fixed costs, we do not believe that this particular regression analysis is reliable, as the shape of the curve depends heavily upon a few policy influenced points.

1 CGC 2013-07-S *Proposed Assessments*, Chapter 27.

2 CGC 2013-07-S *Proposed Assessments*, pages 229-230, paragraphs 17-20.

- In Figure 27-2 of the Discussion Paper, if any of the three largest population States' data points were to move significantly when adjusted to average policy, then the shape of the curve (and therefore the position of the intercept) could change significantly. (There is a similar problem with the CGC's urban transit analysis.)

For the above reasons, and in light of the short timeframe for the 2015 Review, we support the Discussion Paper proposal that the CGC should continue to index the existing administrative scale quantum. We also agree with the Discussion Paper suggestion that the indexation use the ABS State and local government final consumption expenses deflator, as it would give similar results to the existing weighted mix of the consumer price index and labour price index (without the need for judgement about the weights).

29. Interstate Wages

Key Points

- We agree that private sector wage differentials remain a good guide to public sector wage pressures.
- The proposal to assess regional public wages on the basis of capital city wage pressures (plus a loading for States with high regional wage pressures) is profoundly misguided. Moreover, any proposal to separately assess capital city and regional wage pressures faces currently insuperable data obstacles.
  - Western Australia's argument that high accommodation costs in its remote areas need to be assessed by the CGC remains valid.
- While we do not at this stage propose shifting away from the CGC's current measure of interstate wage pressures (based on analysis of the ABS Survey of Education and Training), it is of concern that it appears to significantly understate both private and public sector wage levels in Western Australia.

Private Sector Wage Differentials as a Proxy for Public Sector Wage Pressures

The Discussion Paper notes that its econometric analysis of data from the ABS Survey of Education and Training (SET) provides 'compelling' evidence that private sector State relative wage levels for comparable employees vary between States.[1] We agree that private sector wage levels differ across States for a variety of reasons including labour market conditions, rates of economic growth and cost of living pressures.

1 CGC 2013-07-S *Proposed Assessments*, page 236.

We consider that the differentials in private sector wages are reflected in public sector wages through the influence of similar factors and the requirement for public sector wages to remain competitive with the private sector. There does not need to be significant movement of employees from the public sector to the private sector for pressures in the private sector labour market to be reflected in public sector wage rates. Competition for new entrants and movements of employees during buoyant economic conditions are sufficient to ensure a strong link.

The Discussion Paper notes that there has been a weakening in the relationship between public and private sector wages across States in the 2009 SET data, compared with earlier SET data. This weakening relationship is partly attributed to Western Australia – "While Western Australia's private sector wages have risen to well above average, public sector wages have remained below average".[2] However, we believe that the evidence shows that Western Australian public sector wages are higher than the SET analysis suggests (see our discussion of public sector wages in the section below on *Accuracy of SET Whole of State Analysis*).

Nevertheless, we agree with the paper's conclusion (using other evidence) that the relationship between public and private sector wages is likely to hold in the long term.

Movements in public sector wages often lag those in the private sector, reflecting the relative rigidity of public sector wages settings. Nevertheless, wages in Western Australia over the long term show comparable movements. This can be seen in Figure 1 below, which shows that since 1997 wages in both the public and private sectors have increased in Western Australia by 85%. It can also be seen that Western Australia's growth in wages exceeds the growth in both public and private sectors at the national level.

We note that States do have the policy option of holding down wages in the long term relative to the private sector, if they are prepared to accept a lower standard of employee (i.e. lower employee productivity), and a resultant lower standard of services.

However, competition between the States will limit the scope for such behaviour in the long run.

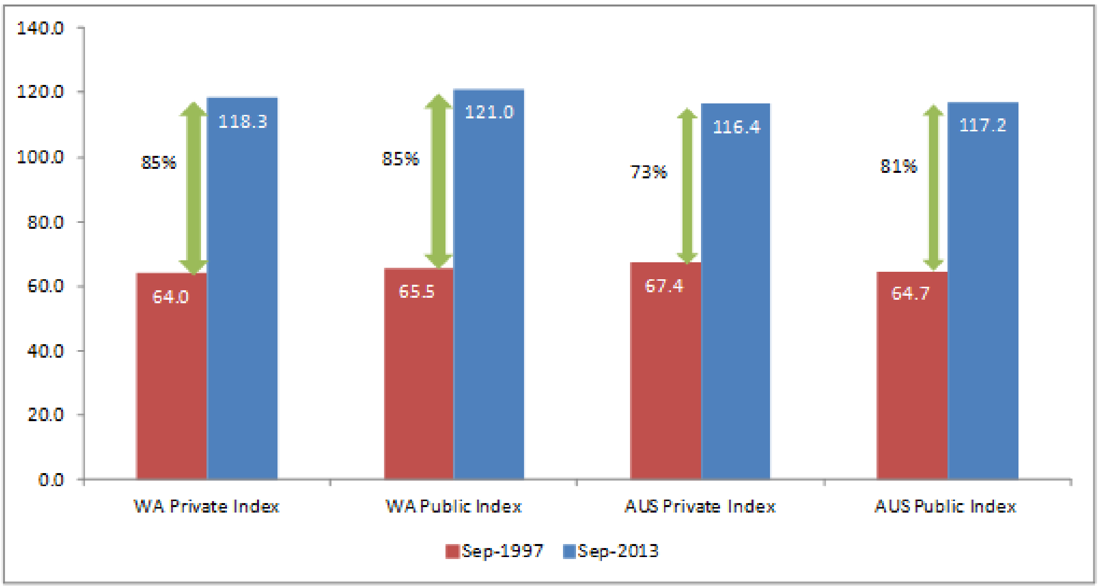
---

[2] CGC 2013-07-S *Proposed Assessments*, pages 237-238.

Moreover, even were some or all States to exercise such policy options, it would not be relevant to wage pressures assessed for fiscal equalisation purposes, as the fiscal equalisation principle is predicated on capacity to provide an equal standard of services. (On a standard policy basis, a lower standard of services would result from holding down wages, but equality in that lower standard of services would still need recognition of private sector wage differentials.)

For all these reasons, we support the continued use of interstate differences in private sector wages as an appropriate proxy for measuring interstate differences in public sector wages.

Figure 1: Wage Price Index Comparison, Sept 1997 to Sept 2013



Source: ABS Wage Price Index, Australia September 2013.

Capital City or Whole of State

The Discussion Paper proposes the use of capital city private sector wages to assess interstate wages, rather than whole-of-State wages, with a State-specific regional loading applied to States with high regional wages. The CGC staff argue that "at least for some parts of the public sector, States set wages through the negotiation of State-wide agreements"[3], which is inconsistent with the current wages assessment.

---

3 CGC 2013-07-S *Proposed Assessments*, page 252.

In support of this approach, the CGC has used its analysis of SET data to argue that the differences in wages between capital city and rest-of-State data are not as large in the public sector as in the private sector.

In practice, based on an econometric analysis of the SET data to identify capital city and regional area wage differentials, the paper is proposing to provide four jurisdictions (New South Wales, Victoria, South Australia and Tasmania) with the capacity to provide regional wages at above-private market levels.

We have major concerns with the SET econometric analysis, which are discussed below. However, even taking the results at face value, the proposal appears untenable.

- At the conceptual level, the proposed assessment is fundamentally inconsistent with the HFE objective of ensuring capacity to provide the same standard of services in all jurisdictions, as it removes the nexus between wages and the standard of services. In effect, the proposed loading for States with low private sector regional wages will allow those States to employ more staff at regional wage rates, or higher quality staff at capital city wage rates.
  - While the CGC justifies the proposal on the basis of 'what States do' in setting wages (an input measure), it should rather be interpreting 'what States do' in terms of service standards (an output measure), as this is what the HFE principle requires. Even if there is a looser relationship between pay and productivity in the public sector than the private sector, it is the cost per unit of productivity that is important in considering the standard of services.
- The approach depends on the assumption that States with lower regional wage pressures (compared with their capital city) will choose to set wages at the capital city level rather than, say, at a State-wide average level, and accept the wage/productivity trade-off in the capital city.
  - Elsewhere in the paper, it is never suggested that the relationship between public and private sector wages is rigid, and that differences cannot be sustained (albeit with a productivity trade-off in the long run).

- The SET analysis (taken at face value) also suggests that States have downwards flexibility on pay levels in regional areas (as estimated underlying public wage levels are lower in the regional areas of all States other than Western Australia). This flexibility is perhaps partly achieved through the use of different pay classifications for like services between regional areas and capital cities (e.g. using a higher pay classification in capital cities for an equal quality manager of people doing comparable tasks).

We do not believe that the SET data can be used to make reliable estimates of capital city versus rest-of-State wage pressures. We consider that SET already struggles to reflect whole-of-State wage pressures. In this regard, other evidence (presented below in the section on *Accuracy of SET Whole of State Analysis*) suggests that:

- the SET analysis understates Western Australia's private sector relative wage levels; and
- Western Australia's public sector wages are higher than the SET analysis suggests.

In addition, the SET analysis of private sector wages does not properly standardise for labour quality due to issues such as the non-equilibrium state of the Australian economy, government policies that restrict labour market flexibility and the tendency for private employers to standardise pay across the regions that they operate in. The impact of these factors will vary across States. For example, in States with relative labour shortages (e.g. Western Australia during the mining boom) employers can be expected to accept some quality/wage trade-off. In principle, these private sector variations in pay per standard quality employee need to be taken into account in the HFE analysis of cost of providing a standard quality of services.

Introducing a capital city/rest-of-State distinction simply compounds the reliability problems of the SET analysis.

- How reliable are the regional weights likely to be? A relatively small sample is used to quantify the net impact in each State of substantial diversity in amenity, cost of living, economic activities, productivity and labour market conditions (labour shortages or surpluses). In addition:
  - the SET survey does not cover very remote areas; and

  - the SET survey will not pick up employer provided accommodation and additional leave entitlements. Private sector employers (at least in Western Australia) often provide subsidised accommodation and other benefits in remote regions on top of higher salaries.

- Given the differences between capital cities and regional areas, how confident can we be that the analysis will reflect a like-for-like comparison of employees? The SET standardisation for industry, occupation, qualifications and skills is unlikely to fully account for differences in work complexity and type of work. Possibly the lower capital city/regional wage differentials observed for the State public sectors simply reflect the greater comparability of capital city and regional public sector activities compared with private sector activities.

- The lack of standardisation for labour quality also becomes more of an issue, as labour supply imbalances in both the capital cities and regional areas have to be considered. Again, this is an important issue for Western Australia.

- The lack of transparency of a capital city/rest-of-State distinction in the SET model is a major issue. It is possible to do a 'reality check' for the SET whole-of-State analysis using alternative data sources on employee earnings, but there is very little alternative data to perform a 'reality check' on the capital city and rest-of-State wage differentials calculated from the SET data.

  - One reality check is that the SET regional weights (that generally show lower wage pressures in regional areas) are not easy to reconcile with the locality allowances and accommodation support provided by States.

For all these reasons we believe that whole-of-State wages data should continue to be used for the wages assessment. This limits the degree of subjectiveness, includes regional wage variations and does not require further increasing the complexity of the assessment via the introduction of regional loadings. Employer accommodation costs and other benefits such as additional leave entitlements that are not picked up in the SET survey should be addressed in the regional cost factors (see the *Regional Costs* chapter).

As noted above, even at the whole-of-State level the SET model has deficiencies (it appears to underestimate Western Australia's wage pressures). However, at this stage we have not been able to identify a more appropriate assessment.

Accuracy of SET Whole-of-State Analysis

We have some concerns with the accuracy of the SET whole-of-State analysis. In particular, other data sources suggest that:

- SET private sector results are conservative for Western Australia; and
- Western Australian public sector wages are comparatively higher than the SET analysis indicates.

Private sector wages data

The CGC's analysis of 2009 SET data shows that Western Australia's private sector wages are 5.6% higher than average for comparable employees (and about 6.6% higher in 2011-12 after using the labour price index adjustment).

However, ABS Employee Earnings and Hours data (see Table 1) indicates that this is conservative, with Western Australia exceeding the national average pay by 19% overall (May 2012).

While Western Australia's relative pay level varies widely across occupations, there is no evident bias to particular types of occupations, and in over 50% of cases Western Australia is ranked highest among the six States.

Table 1: Occupation Pay Comparison (Total of Private and Public), May 2012

Occupation code	WA compared to Australia	WA rank amongst six States
212 Media professionals	0.65	6
223 Human resource and training professionals	1.15	1
224 Information and organisation professionals	0.96	4
225 Sales, marketing and public relations professionals	1.12	1
242 Tertiary education teachers	0.96	4
251 Health diagnostic and promotion professionals	1.14	2
261 Business and systems analysts, and programmers	1.08	1
271 Legal professionals	1.18	1
313 ICT and telecommunications technicians	1.02	2
322 Fabrication engineering trades workers	1.29	1
341 Electricians	0.97	4
351 Food trades workers	1.23	1
431 Hospitality workers	1.02	2
451 Personal service and travel workers	0.76	6
511 Contract, program and project administrators	1.05	2
512 Office and practice managers	0.97	5
521 Personal assistants and secretaries	1.09	1
541 Call or contact centre information clerks	0.99	5
551 Accounting clerks and bookkeepers	1.14	1
552 Financial and insurance clerks	1.08	1
561 Clerical and office support workers	1.23	1
591 Logistics clerks	1.14	1
599 Miscellaneous clerical and administrative workers	0.92	5
611 Insurance agents and sales representatives	1.02	3
612 Real estate sales agents	1.05	2
621 Sales assistants and salespersons	1.10	1
639 Miscellaneous sales support workers	0.99	4
712 Stationary plant operators	1.16	1
721 Mobile plant operators	1.00	3
733 Truck drivers	1.21	1
741 Storepersons	1.13	1
811 Cleaners and laundry workers	1.46	1
831 Food process workers	1.26	1
All Occupations 2012	**1.19**	**1**

Source: ABS Employee Earnings and Hours, Australia, May 2012. Average weekly cash earnings (total of ordinary time and overtime), persons. Table includes only those occupations for which data was available for the six States. The 'All Occupations 2012' line includes data for all occupations including those for which data were not available for all six States.

Data from the Australian Taxation Office Statistics for 2010-11 by industry similarly show a much higher result for Western Australia than the SET analysis (11% versus 6-7%), with Western Australia having the highest wages for all but two industries (see Table 2).

Table 2: Industry Salary Comparison (Total of Private and Public), 2010-11 data year

Industry	WA compared to Australia	WA rank amongst six States
Agriculture, Forestry and Fishing	1.22	1
Mining	1.12	1
Manufacturing	1.30	1
Electricity, Gas, Water and Waste Services	1.35	1
Construction	1.21	1
Wholesale Trade	1.14	1
Retail Trade	1.08	1
Accommodation and Food Services	1.14	1
Transport, Postal and Warehousing	1.17	1
Information Media and Telecommunications	1.08	1
Financial and Insurance Services	1.05	2
Rental, Hiring and Real Estate Services	1.15	1
Professional, Scientific and Technical Services	1.11	1
Administrative and Support Services	1.13	1
Public Administration and Safety	1.22	1
Education and Training	1.10	1
Health Care and Social Assistance	1.14	1
Arts and Recreation Services	1.02	2
Other Services	1.17	1
All Industries 2010-11	**1.11**	**1**

Source: Taxation Statistics 2010-11, Australian Taxation Office.

Public sector wages data

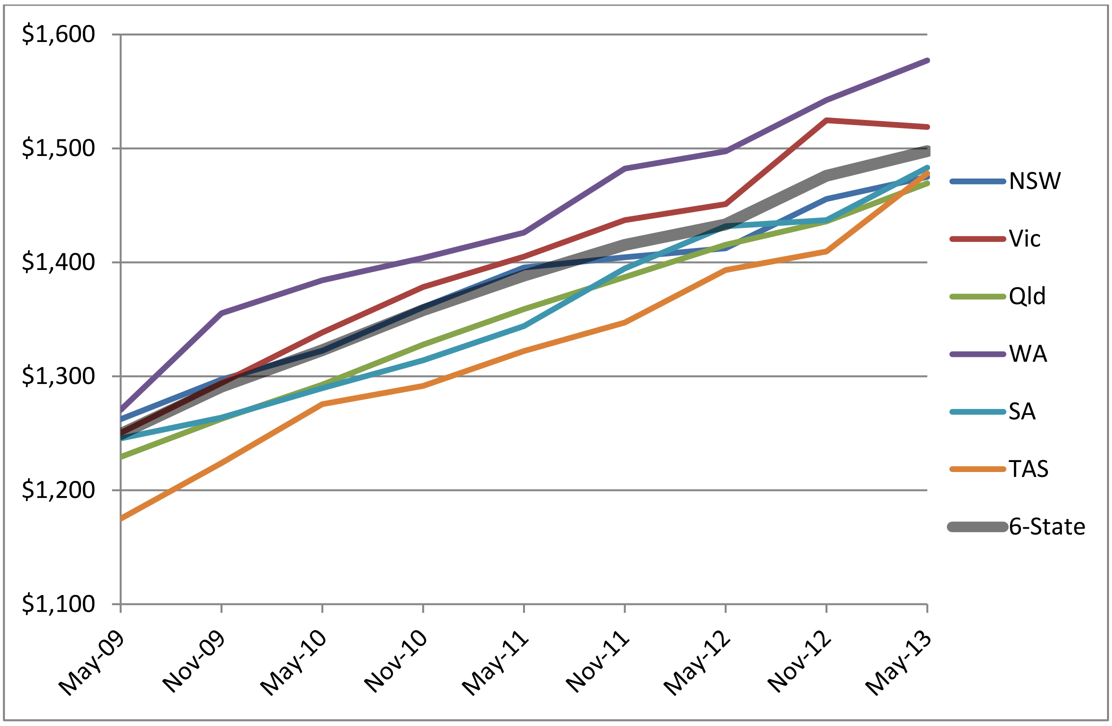
The CGC's analysis of 2009 SET data shows that Western Australia's public sector wages are 3.7% lower than average for comparable employees (and about 3.1% lower in 2011-12 after using the labour price index adjustment).

While Figure 28-4 in the Discussion Paper shows that Western Australia has below average award rates of pay for registered nurses, the nurses data is not representative of average pay levels. For instance, data for teachers is freely available on the national unions website (http://www.aeufederal.org.au/Industrial/index2.html#Salaries) and shows Western Australia as clearly having the highest paid teachers.

Table 3 below presents data taken from the Australian Taxation Office Statistics for 2010-11 for those occupations with significant numbers of public sector employees. This data suggests that public sector wage rates in Western Australia generally exceed the national average.

Further evidence in Figure 2 below, based on Average Weekly Earnings data, shows the strength of public sector wages in Western Australia. While this data is non-standardised, public services across States are relatively uniform.

Figure 2: Average Weekly Ordinary Time Earnings, Full Time, Public Sector



Source: ABS Average Weekly Earnings, Australia, 2013. ACT and NT data are excluded due to lack of comparability with other States' public sectors.

As seen in Figure 2, over the period May 2009 to May 2013, public sector wages in Western Australia were above all States. In May 2009, Western Australian wages exceeded the States' average by 1.7%. Over the period May 2009 to May 2013, Western Australian wages averaged 4.0% higher than the average across all States.

Table 3: Occupation Taxable Income Comparison 2010-11 data year

Occupation code	WA compared to Australia	WA rank amongst six States
1324 Policy and Planning Managers	0.93	4
1343 School Principals	0.99	3
1344 Other Education Managers	1.01	3
1399 Other Specialist Managers	1.19	1
2249 Other Information and Organisation Professionals	1.15	1
2411 Early Childhood (Pre-primary School) Teachers	1.17	1
2412 Primary School Teachers	1.02	2
2413 Middle School Teachers	1.02	2
2414 Secondary School Teachers	1.05	1
2422 Vocational Education Teachers	1.06	2
2531 Generalist Medical Practitioners	1.14	1
2535 Surgeons	1.15	1
2544 Registered Nurses	1.03	2
2713 Solicitors	1.10	1
2725 Social Workers	1.11	1
2726 Welfare, Recreation and Community Arts Workers	1.08	1
3112 Medical Technicians	1.03	2
4114 Enrolled and Mothercraft Nurses	0.99	4
4117 Welfare Support Workers	0.96	5
4221 Education Aides	1.04	3
4233 Nursing Support and Personal Care Workers	1.05	1
4413 Police	1.01	2
4421 Prison Officers	1.01	3
5111 Contract, Program and Project Administrators	1.11	1
5121 Office Managers	1.13	1
5310 Public servant - administrative service officer	1.03	1
5311 General Clerks	1.10	1
5412 Inquiry Clerks	1.04	4
5619 Other Clerical and Office Support Workers	0.92	5
7312 Bus and Coach Drivers	1.09	1
7313 Train and Tram Drivers	1.17	1
8112 Commercial Cleaners	1.05	1
Total of All Occupations Above 2010-11	**1.05**	**1**

Source: Taxation Statistics 2010-11, Australian Taxation Office.

30. Interstate Non-Wage Costs

Key Points

- We are concerned about the CGC's proposal to not assess these costs for jurisdictions other than Tasmania and the Northern Territory. We consider that, if all aspects of interstate non-wage costs were assessed, the result would probably be a material disability for Western Australia.
- We do not understand the CGC explanation of its lack of confidence in an assessment of interstate non-wage costs for all jurisdictions, and we ask the CGC to reconsider a general assessment, rather than just selectively assessing these costs for Tasmania and the Northern Territory.
- We endorse in principle the CGC's approach to not assessing a disability where it cannot assess all aspects of the disability and has a lack of confidence in a partial assessment (though we don't think this applies to interstate non-wage costs), and consider that it should apply the same approach in other assessments (for example, Physical Environment).

The Discussion Paper[1] lists a range of interstate costs assessed in the 2004 Review for which a conceptual case exists.

The CGC staff conclude that they "have no evidence that we would be closer to achieving HFE by assessing only one or some of these disabilities than by not assessing interstate non-wage costs at all", reflecting that "In 2009, the total redistribution from interstate non-wage costs assessments moved in the same direction as the accommodation assessment for only three States". As such, the CGC staff recommend that the CGC cease the Interstate Non-Wage assessments, arguing that:

- the largest component (i.e. costs for Tasmania and the Northern Territory) is now captured within the Regional Costs assessment; and
- the CGC staff have no confidence that the residual components are better proxied by those elements for which data exists than by an EPC assessment.

[1] CGC 2013-07-S *Proposed Assessments*, page 257.

The CGC's reasoning is difficult to understand.

- It is not clear why the reference to the 2009 assessments is relevant, as the CGC should be able to construct assessments for all the major elements of interstate non-wage costs from available more recent data. While the Freight assessment suffers from a paucity of data, there is some data for this assessment (e.g. the CGC noted in its 2010 Review report that New South Wales, Victoria and Queensland are the main centres of production and importation).

- While the CGC will continue to provide some recognition of interstate non-wage costs for Tasmania and the Northern Territory through the Regional Costs assessment, the costs faced by Western Australia will not be accounted for.

The currently excluded Office Accommodation assessment is expected to be material for Western Australia (see our July 2013 submission). We consider that if all the interstate non-wage factors were considered, the overall assessment would be significant for Western Australia (with expected positive needs for travel, freight, electricity and office accommodation). Accordingly, we ask the CGC to reconsider the merits of a general assessment of interstate non-wage costs, rather than an assessment that favours Tasmania and the Northern Territory.

If the CGC chooses to abolish this assessment for most jurisdictions, due to a lack of all required data to assess every factor within the assessment, and the gaps being considered too material, then a consistent approach should be applied to all assessments.

We consider that an 'all or nothing' approach is indeed appropriate if the missing elements in an assessment are sufficiently material (though we doubt this is the case with interstate non-wage costs). A case in point is the suggested physical environment assessment, which considers some, but not all, of the physical environment factors which are likely to have a material impact. Some excluded factors (e.g. flooding and soil salinity) are expected to be material for Western Australia, and acting in the opposite direction from the included factors (see *Physical Environment* chapter of this submission for further detail).[2]

[2] As noted in the *Physical Environment* chapter, there are a range of considerations pointing to the low reliability of the suggested physical environment factor.

31. Regional Costs

Key Points

- As discussed in the *Interstate Wages* chapter, the CGC proposals for 'recognition' of regional cost differences determined from modelling of private sector wage pressures are considered unsound (there is effectively no recognition of regional cost differences). Instead, we recommend that the CGC reconsider the case presented in our July 2013 submission for recognition of staff accommodation costs in Western Australia's remote regions being higher than in other States' remote regions.
- For categories other than Schools Education and Justice Services, we recommend that the CGC continue to use an average of schools and police regional cost gradients, as there is no reason to consider the schools gradient to be more representative than the police gradient.
- We recommend that the CGC continue to assess regional costs for prisons, which are significant.
  - Locating prisons in remote regions is important for reducing recidivism, through maintaining prisoners' links with their community.

Interstate Cost Differences for Communities of Comparable Remoteness

In our July 2013 submission to the 2015 Review, we argued that the CGC's dispersion assessments should take into account State by State differences in housing accommodation costs in areas of similar remoteness, given the strong evidence to suggest that regional rents vary markedly across the States in these areas.

The Discussion Paper effectively recommends the application of a State specific 'loading' to States with both low and high regional wages, compared to their capital cities. In the case of States with high regional wages (mainly Western Australia), this would be achieved through a loading to the regional cost factor, determined through modelling of private sector wage pressures in capital city and regional areas, based on data from the ABS Survey of Education and Training (SET).[1]

The CGC staff claim that this would cover the cost of paying additional allowances in States with high regional wages, in the form of bonuses or accommodation (reflecting the total additional cost required to attract staff to the affected regions).

The problems with this proposal are covered in detail in the *Interstate Wages* chapter of this submission. As can be seen from that chapter, some specific problems are that:

- the loading for States with high regional wages (i.e. high relative to capital cities) is effectively undercut by the loading for States with low regional wages (i.e. low relative to capital cities). It is proposed that States with low regional wages will have their regions equalised to capital city wage levels, allowing those States to employ more staff at regional wage rates, or higher quality staff at capital city wage rates);
- the Western Australian regional wage loading modelled from the SET private sector data is highly unreliable and probably significantly understated due to the lack of comprehensive geographical coverage of the sample data, the lack of inclusion of employer accommodation subsidies, and the inability to standardise wages for productivity[2] (which is necessary to ensure the HFE objective of equal capacity to provide services); and
- private sector employers (at least in Western Australia) often provide subsidised accommodation in remote regions on top of higher salaries.

Therefore, we believe that the CGC should not pursue its proposed approach, and instead make a specific adjustment for higher accommodation costs in Western Australia as recommended in our July 2013 submission.

---

1 The 'loading' for States with low regional wages is proposed to be done through the wages assessment, by applying a capital city wage assessment across the whole State.

2 Wage/productivity trade-offs are likely to be greater in States with labour shortages.

Exclusion of Police Data when Extrapolating to Other Services

The Discussion Paper[3] proposes that the CGC solely apply the regional costs gradient for schools (calculated from a regression on the ACARA[4] *My School* data) when extrapolating the regional costs of other services. In the 2010 Review, the CGC applied the average of the police and schools regional costs gradients (both calculated from data supplied by the States).

The CGC staff argue that there has been no significant improvement or standardisation of the State police staffing data since the 2010 Review, while they consider that the new data available from the ACARA represents a significant improvement in the schools data.

Even if this is the case, there is no evidence that the police regional cost gradient is in error, and we therefore consider it more appropriate to average the two regional cost gradients, to provide a more representative assessment of regional costs.

Assessment of Regional Costs for Justice

CGC staff have proposed[5] to only apply the regional cost gradient to police expenses within Justice services, rather than extrapolating to the whole category.

We believe the extrapolation is valid, as demonstrable regional costs do exist for other functions within Justice Services, with the police gradient being an appropriate proxy to capture these costs.

Data collected from the Western Australian Department of Corrective Services shows that significant differences exist in the direct operating expenses of prisons across areas of differing remoteness. As Table 1 demonstrates, the average cost per day per adult prisoner in custody in remote prisons is over double the cost for a metropolitan prison.

3 CGC 2013-07-S *Proposed Assessments*, pages 261-262.

4 Australian Curriculum and Reporting Authority.

5 CGC 2013-07-S *Proposed Assessments*, pages 261-262.

Table 1: Comparison of Metropolitan and Regional Prison[a] Costs, 2012-13 data year

Prison	Daily Average Population (persons)	Direct Prison Operation Expenses ($'000's)	Cost Per Day Per Adult Prisoner in Custody ($/person)
Metropolitan			
Acacia Prison (contract only)	993	50,542	140
Casuarina Prison[b]	622	44,705	197
Hakea Prison	881	47,795	148
Bandyup Women's Prison	279	18,501	181
Total Metropolitan	***2,775***	***161,244***	***159***
Regional			
Albany Regional Prison	304	21,461	193
Bunbury Regional Prison	324	20,552	174
Greenough Regional Prison	284	18,837	181
Total Regional	***913***	***60,850***	***183***
Remote			
Broome Regional Prison	85	12,077	390
Eastern Goldfields Regional Prison	86	9,086	290
Roebourne Regional Prison	149	19,503	358
Total Remote	***320***	***40,667***	***348***

Source: Department of Corrective Services

(a) Excludes prison farms, work camps and pre release centres.

(b) Casuarina is the primary maximum security prison for Western Australia, and so would be expected to have relatively high costs.

Centralising prisons in such a large State would make it extremely difficult for prisoners to maintain family and community ties where they are incarcerated a significant distance from home. Other negative externalities associated with housing prisoners a long distance from home include an increased incidence of recidivism, increased difficulty in re-entering into the community and increased crime rates.[6]

[6] *Housing of DC Felons Far Away From Home: Effects on Crime, Recidivism and Reentry*, 5 May 2010, http://oversight.house.gov/wp-content/uploads/2012/01/20100505fornaci.pdf

32. Service Delivery Scale

Key Points

- Fitting costs to different combinations of town size and distance to down has little impact on the R-squared, so we recommend that the CGC investigate if the resultant disability factors differ materially.

The Discussion Paper[1] considers changing the definition of service delivery scale areas in light of the new ACARA *My Schools* data, which CGC staff consider is more detailed and comparable than data previously available

The CGC staff have hypothesised that 'funding variations due to [service delivery scale] were best explained by a variable defined by the distance from towns of a certain size'. Working under this hypothesis, the CGC staff have performed a regression analysis on 30 different combinations of town size (5 categories) and distance to town (6 categories). CGC staff have recommended that the permutation with the highest R-squared value (town of 5,000; more than 20 kilometres) be used to measure the schools education SDS disability.

While we agree with this logic in principle, Figure 31.1 in the Discussion Paper shows that across the 30 different permutations, there is very little difference in R-squared values (the values range from between 0.469 and 0.484). In addition, there is little variation in the results for a fixed town size as the distance to town is varied, with the larger town sizes showing virtually no variation at all.

As such, it is important to ascertain whether the choice of definition used will have a material impact on the service delivery scale disability factors – particularly with regard to distance to town. While we understand that it may not be feasible to perform the calculations for the 30 different permutations, we consider it is necessary to perform calculations for at least some of the definitions to see if material differences appear in the resulting disabilities. As the R-squared values are immaterially differentiated, the choice of definition should desirably not have a material effect on the outcome.

If the analysis shows significant differences, it may be necessary to further consider the definition of service delivery scale-affected areas.

---

[1] CGC 2013-07-S *Proposed Assessments*, Chapter 31.

33. Population

Key Points

- We suggest that the CGC explore the materiality of switching from December to June populations for the capital assessments, before making a decision regarding this.
- We do not believe that age groups should be mechanistically aggregated by the use of materiality thresholds.

Population Growth Estimates

The Discussion Paper proposes using June populations to measure asset requirements.[1]

If the capital assessments were being developed from scratch, there would be some case for doing this. However, we doubt that using June populations instead of December populations will have a material impact over time (but will add complexity, as the CGC will still be using December populations in other parts of the assessments).

Also, switching from December to December growth to June to June growth will skip growth between December and June in the year that the switch occurs. If this is an atypical year for population growth, there could be a material transitional impact.

We suggest that the CGC explore these issues before deciding on which populations to use for the capital assessments.

Age Groups

As discussed in the *Implementation and Methodological Issues* chapter of this submission, we do not believe that materiality should be used in a mechanistic manner. Disabilities should be calculated as accurately as possible, based on conceptual grounds and available data, to ensure transparency.

1 CGC 2013-07-S *Proposed Assessments*, page 279, paragraph 3.

34. Physical Environment

Key Points

- We have significant concerns with the CGC considering the Pottinger/AECOM consultancy report as a basis for a new physical environment assessment. In particular:
  - there are significant limitations with the existing report;
  - there is a lack of comparability with a previous report commissioned by the CGC for the 2004 Review;
  - Rawlinsons cost indices may provide a more comprehensive measure of relative construction costs;
  - while our consultation with technical experts is at an early stage, they have identified significant preliminary concerns; and
  - assessing a physical environment factor using partial information would not be consistent with the proposed abolition of the interstate non-wages factor on similar grounds.

The CGC commissioned consultants (Pottinger and AECOM) to prepare a report on the impact of environmental characteristics on assets costs (the report). In the Discussion Paper, the CGC has sought State views as to whether the report provides a suitable basis for assessing the effects of the physical environment on infrastructure costs.[1]

Limitations of the Existing Report

Significant methodology issues are the lack of documentation on the shortlisting of the 'numerous' (i.e. eight) potential factors, and the selective assessment of the shortlisted factors that were identified as potentially material (salinity and flooding being omitted). While we accept that it may be hard to readily source data to accurately assess some of the identified factors, the implications of not assessing them need to be considered.

[1] CGC 2013-07-S *Proposed Assessments*, page 132.

In addition to this, there is a high degree of judgement in choosing how to assess the selected factors. For example, climate represents an amalgam of factors (see below), but the report focuses only on the cost impact of 'high levels of precipitation' in assessing a cost uplift factor for roads.

We are also concerned that most of the data is internally sourced by AECOM and is unable to be verified. This brings into question the transparency of the model.

Comparison with Previous Proposed Methodology

In the 2004 Review the CGC attempted to develop a climate factor for buildings using a report commissioned from the CSIRO on the impact of climactic conditions on building materials. The CGC ultimately abandoned this effort, but it is instructive to compare the two proposed methodologies, which are completely different.

- The Pottinger/AECOM report considers climate as a single characteristic, applying cost uplift factors (based on a general judgement about the aggregate impact of climate on each asset type) for six discrete climate zones to determine an overall disability per asset class. The outcome for Western Australia (calculated in a spreadsheet provided by CGC staff) is a construction cost disability relative to the national average of essentially zero for buildings (0.04% cost disability for housing and 0.05% cost advantage for schools).
- The 2004 proposal considered climate as a composite of eight characteristics (temperature, salt, condensation, relative humidity, wetness, biological agents, pollution and ultraviolet light), whose relative degradation rating was determined by considering the susceptibility of 18 different building materials to each of these eight characteristics (using a standard set of susceptibility weights). For each of the eight characteristics, high/medium/low risk zones were identified and weighted accordingly, and the results aggregated using the relative degradation ratings to determine an overall disability for building depreciation. The outcome for Western Australia was initially a cost disability of 5.0%, later reduced to 1.6% when the susceptibility weights were reduced by judgement. The CGC noted that dust and soil were not included in the assessment (the latter being assessed separately by Pottinger/AECOM).

This work shows climate factors identified to have an impact on Western Australia's relative building costs anywhere between 0% and 5%.

If the CGC were to commission another report on the impacts of the physical environment on asset costs, we may see a different methodology again with a different set of environmental factors.

As can be seen, a fundamental problem is the need for judgements on the choice of factors, level of detail and cost weights.

Use of Rawlinsons Cost Indices to Capture Physical Environment Factors

In the Discussion Paper, the CGC discusses a capital costs factor based on the Rawlinsons regional construction cost indices, noting that the introduction of a physical environment factor in addition to this could create some double counting. The CGC notes that final consideration of the two issues would need to ensure that double counting is avoided.[2]

We have followed up with Rawlinsons regarding the extent to which the effects of the physical environment are captured in the Rawlinsons cost indices. While generally no explicit allowance is made for physical environment factors[3], factors such as weather are implicitly contained within the indices. In addition, it was suggested that the majority of the interstate variation is driven by market forces such as cost and demand pressures, wages and freight, and that the impact of the physical environment may be a relatively minor source of variation in construction costs.

Consultation with Technical Experts

Given the technical nature of the proposed assessment, we have liaised with technical experts in order to make a more informed response.

In particular, we have been consulting with the Western Australian Treasury Corporation (WATC) and Main Roads Western Australia (MRWA). We have not received comprehensive responses from either party yet due to the complexity of the matter, but have received interim responses. We provide some commentary below, but note that we will have more to say on this matter when we receive final responses from the WATC and MRWA.

[2] CGC 2013-07-S *Proposed Assessments*, page 198.

[3] An exception is cyclones and other serious weather events in some regional areas of Western Australia and Queensland.

Western Australian Treasury Corporation

WATC raised concerns regarding the transparency of the report, in particular the extensive use of internally sourced data, so that they were unable to readily validate the information on uplift factors. WATC also echoed our concerns regarding the judgements made on inclusion of factors, and the bias that could introduce into any assessment.

The uplift factors also depend on the range of costs considered. As an example, WATC refers to the consultant's proposed method of valuing the asset base for roads (pages 24 and 25). The report refers to developing a 'typical rural road' cost range, by selecting typical road attributes and applying AECOM civil infrastructure cost estimators, while excluding several items such as road design costs, consultants fees, kerbing and road safety barriers.

WATC was also concerned with the internal consistency within the report. For example, the report identified a number of areas where more accurate data is required. In some areas, it made broad assumptions based on expert opinion backed up with whatever meaningful information was available, and then applied those assumptions to develop uplift factors. However, in other areas, they have made no assumptions on relatively important factors such as flooding and salinity.

Main Roads Western Australia

Main Roads has provided an interim response stating that:

- the assumptions and methodology used in the model may not be based on a solid understanding of roads materials and circumstances in Western Australia;
- it is hard to validate rainfall and other environmental effects claimed in the report; and
- uplift factors may potentially be identified for more of our assets than suggested in the report.

Consistency with Other Assessments

A physical environment assessment on the basis of the simplified and partial analysis in the report would not be consistent with the CGC staff's proposed approach to the interstate non-wages factor.

The CGC staff propose to cease the interstate non-wages assessment arguing that they have no evidence that they would be closer to achieving HFE by assessing only one or some of these disabilities than by not assessing interstate non-wage costs at all.

As stated in our *Interstate Non-Wages* chapter, we endorse in principle the CGC staff approach to not assessing a disability where it cannot assess all aspects of the disability and has a lack of confidence in a partial assessment. We consider that this is relevant to the suggested physical environment assessment, which applies a very broad brush assessment compared with what was attempted in the 2004 Review (yielding very different results) and considers some, but not all, of the physical environment factors which are likely to have a material impact.

35. Draft Quality Assurance Strategic Plan

Key Points

- The HFE methods could benefit from external review overall, to assess whether the CGC is appropriately achieving the HFE principle, particularly having regard to consistency of approach and data and method uncertainties.
- Quality assurance that operates across a number of annual updates is needed to ensure that all natural disaster relief payments from the Commonwealth are included in the assessments at some stage.

The content of the *Draft Quality Assurance Strategic Plan* Discussion Paper seems generally reasonable.

However, the HFE methods could benefit from external review overall by suitably qualified economists, to assess whether the CGC is appropriately achieving the HFE principle, particularly having regard to consistency of approach and data and method uncertainties. The GST Distribution Review did not undertake such a review, consistent with its terms of reference.

Also, as discussed in the section on *Natural Disaster Relief* in the chapter on *Other Expenses* earlier in this submission, the CGC needs to ensure that all natural disaster relief payments from the Commonwealth are included in the assessments at some stage. This requires an extra degree of quality assurance, which examines not just the latest assessment year, but also previous assessment years, to ensure that all payments are captured over time. Full engagement with States will be an important element of this process.