



Response to Commission Position Paper 2008/10

Mining Revenue

Department of Treasury and Finance

January 2009

Summary

- Tasmania does not consider that the proposed Mining Revenue assessment, in its current form, accurately measures what it is supposed to measure. It significantly overestimates Tasmania's revenue raising capacity.
- The proposed assessment does not fully recognise either of the two separate disabilities that affect a state's royalty raising capacity.
- The Commission could address both of these disabilities through a simple adjustment based on each state's relative level of gross operating surplus for mining.
- Such an adjustment would remove the need to split the assessment into components and, therefore, would simplify the assessment. Tasmania has developed a proposed adjustment, the detail of which is included in this submission.
- Alternatively, the Commission could address one of the two disabilities by disaggregating minerals to a more appropriate level. However, this would still leave the other disability unrecognised. This alternative is a second-best option in Tasmania's view.
- If the Commission is to assess revenue in separate components, it would be better to group minerals according to their average royalty rates rather than by whether they are 'energy' or 'non-energy' minerals.
- Tasmania is concerned about the magnitude of the impact of using ABS data for the proposed method, compared to the data used in the current method.

Measuring capacity

1. Tasmania acknowledges that, because of limited data availability, the Commission has little choice but to use value of production as the mining revenue base in its assessment. One of the benefits of this approach is that it is transparent - value of production is ostensibly what most states tax.
2. However, value of production is not an ideal conceptual measure, for the reasons discussed below. Although Tasmania accepts value of production as the only workable measure of the revenue base, we think its shortcomings should be acknowledged – and adjusted for – where possible.

3. Tasmania has previously argued for an economic rent or profit-based measure for mining revenue. In Staff Discussion Paper 2007/03-S Commission staff conceded that 'conceptually, a direct rent-based measure would have been most appropriate'.
4. A measure based on the profitability of mines would have been ideal because it would have best captured the capacity of mines to pay royalties. This is because a profit measure recognises that the cost of extracting minerals is going to be different in any state due to a number of factors – the type and mix of minerals, the location and accessibility of mineral deposits, exploration costs, proximity to existing infrastructure, and other factors outside a state's control.
5. A mine's value of production is not an accurate reflection of its capacity to pay royalties. Value of production is determined by commodity prices in the (usually international) market, which do not alone necessarily reflect relative differences in the cost of extraction between mineral types, nor relative differences in the profitability of any particular region or for any particular mining operation.
6. The importance of different costs on a mine's capacity to pay royalties is demonstrated by the wide spread of royalty rates for different types of minerals. Most states tax value of production but, by setting different royalty rates for different minerals (and in some cases, setting different rates for different mines), state governments are attempting to account for different extraction costs, and therefore different profitability and capacity to pay royalties. In Tasmania's case, the State has opted for a royalty system partly based on profitability, so that it can capture these differences automatically.
7. The common policy of using value of production as a basis on which to assess royalties stems largely from the administrative difficulty of requiring cost information by mining operation. However, in aggregate the costs as reported across a sector would be more than adequate for the Commission's needs of determining capacity to raise royalties at the state level. Tasmania believes that a quasi-profit measure is available that would allow for consistent treatment (in aggregate) across jurisdictions. This is discussed further below.
8. For those states that tax value of production, there are still large differences between them in their royalty rates, and in how royalties are calculated. Mining royalties are probably the least 'harmonised' of all state revenue sources. Again, this mostly reflects state differences in the cost and profitability of mining various groups of minerals.
9. Therefore, two states could have the same value of mining production, but different revenue raising capacities. The reasons for this can be separated into two distinct disabilities.

10. The first disability is due to the fact that the cost/profit of extracting the same mineral can be greater in one state than in another. In some cases a mineral attracts relatively high royalty rates in one state, and low rates in another – possible evidence that the average production costs for the same mineral are different between the two states. This means that royalty raising capacity will be different for the same mineral in different states.
11. A value of production approach cannot capture this different capacity, because the Commission has no information about the costs of production in each state. The only option for rectifying this would be to make an adjustment to account for this. Such an adjustment is discussed further below and shown in Table 2.
12. The other disability comes about because of differences in the mix of the types of minerals in each state. Mineral royalty rates within a state tend to vary for different minerals, and there are similarities between states in the relative rates they apply. For example, most states tax oil and gas at a much higher rate than most other minerals. This suggests that profitability of oil and gas is much greater, per dollar of production, than most other minerals. A state with a relatively high portion of its production in oil and gas therefore has a revenue raising advantage over other states.
13. Fortunately it is possible to capture this particular disability through the use of disaggregation into components. The current energy and non-energy components partly address this, but the method could be improved through further disaggregation, and possibly the use of more appropriate components – see section on ‘disaggregation and components’ below.
14. It is especially important to Tasmania that both of these disabilities are recognised, because the State’s existing mines are less profitable than those in other states. Some of the reasons for lower average profitability in Tasmanian mining operations include the following:
 - Tasmania’s mining operations are smaller on average and lack the economies of scale enjoyed by some very large operations interstate;
 - mines are generally deeper so that ore is more expensive to lift to the surface, and capital use is more intensive;
 - mines are older, so that mineral and ore deposits are sparser, the more accessible deposits having been extracted in years past. Older mines also generally have older, less efficient infrastructure, both in the underground mines and on ground mills;
 - average intrastate and interstate freight costs are higher than average in Tasmania;

- the terrain on the West Coast, where most of the major mines are based, is quite steep with dense vegetation, making the cost of constructing and maintaining haul and other roads expensive; and
 - rainfall is high, particularly on the West Coast, so that dewatering is an issue and the cost of pumping is high.
15. Evidence for lower profitability in Tasmanian mining can be seen by comparing gross operating surplus for mining in Tasmania to that of other states. Gross operating surplus is not an exact measure of profit, but the two measures are closely related, the ABS using company gross operating profit data to compile gross operating surplus estimates in the National Accounts. At the very least, the gross operating surplus of each state's mining industry should indicate broadly the *relative* levels of profitability in each state.
16. Table 1 below expresses each state's gross operating surplus for its mining industry as a ratio to the value of mining production.

Table 1 – Ratio of gross operating surplus* to value of production, mining

	NSW	Vic	Qld	SA	WA	Tas	NT	Aust
2001-02	0.35	0.57	0.48	0.48	0.56	0.12	0.71	0.51
2002-03	0.37	0.48	0.54	0.57	0.54	0.13	0.63	0.52
2003-04	0.37	0.64	0.52	0.40	0.49	0.09	0.69	0.49
2004-05	0.39	0.45	0.58	0.42	0.58	0.15	0.55	0.53
2005-06	0.47	0.51	0.57	0.41	0.67	0.15	0.55	0.58
2006-07	0.62	0.63	0.60	0.52	0.72	0.25	0.58	0.65
Average	0.35	0.57	0.48	0.48	0.56	0.12	0.71	0.51

*Gross operating surplus also includes gross mixed income

Source: ABS: State Accounts (5220.0); Mining Operations, Australia (8415.0).

17. The ratio for Tasmania in Table 1 is striking. It suggests much lower profitability (i.e. higher extraction costs) in Tasmanian mining than for any other state. We have concerns about the volatility of state gross operating surplus estimates at the industry level, which is why we have also included an average. We are also aware that there may be issues around comparing State Accounts GOS estimates and value of production – GOS is industry based, while value of production is commodity based. There is also the issue that value of production statistics include offshore oil and gas production for some states, even where states cannot collect royalties on this production – however, we understand that the State Accounts treatment of offshore activity is similar, so the two datasets should still be comparable.
18. Table 2 below converts the ratios in Table 1 to relative factors. We think that these factors could be used to adjust for differences in state revenue raising capacity that are not captured in the value of production approach. The factors would be multiplied by each state's value of production.

Table 2 – Ratios in Table 1 relative to the Australian average

	NSW	Vic	Qld	SA	WA	Tas	NT	Aust
2001-02	0.68	1.12	0.93	0.95	1.10	0.23	1.39	1.00
2002-03	0.72	0.93	1.05	1.10	1.05	0.24	1.22	1.00
2003-04	0.76	1.30	1.05	0.81	1.00	0.17	1.40	1.00
2004-05	0.73	0.84	1.08	0.78	1.09	0.29	1.03	1.00
2005-06	0.81	0.87	0.97	0.70	1.14	0.26	0.95	1.00
2006-07	0.95	0.97	0.92	0.80	1.10	0.39	0.89	1.00
Average	0.77	1.00	1.00	0.86	1.08	0.27	1.15	1.00

19. We note that, if the Commission were to make an adjustment to account for differences in mining profitability, then there would be no need to disaggregate minerals into components, since the different revenue raising capacity for different minerals would be automatically captured through the GOS adjustment. This would make the assessment simpler than that currently proposed.
20. Without an adjustment, the proposed value of production approach, in its current form, is not able to accurately measure what it is supposed to measure. In Tasmania's case, the assessment substantially overestimates Tasmania's revenue raising capacity, because it assumes that Tasmania can apply Australian-average royalty rates to value of production. In reality, if Tasmania were to apply Australian average royalty rates, these would further reduce the profitability of Tasmanian mines. This would inevitably impact on the viability of some mines, and deter some mining companies from operating in Tasmania.
21. In the 2004 Review, the Commission accepted that there were assessment years for which Tasmania (and NSW) was not able to apply average royalty rates to its base, and it discounted the State's assessed revenue base to recognise this. The discounts were removed when commodity prices increased and Tasmania's mining production improved. However, mining industry conditions are changing again due to falling worldwide demand for commodities, and it may be that further adjustments could become necessary. However, Tasmania's suggested GOS adjustment would avoid the need to make any such discounts.

Disaggregation and components

22. The following comments include Tasmania's suggestions on a more appropriate disaggregation for the mining assessment. Note that we do not consider that any of these modifications would be necessary if the Commission were to make the adjustment Tasmania suggests above.

23. The Commission intends to make separate assessments for energy and non-energy minerals. While these groupings may seem like a logical simplification/aggregation of the components in the current method, they are not necessarily the most appropriate groupings, because royalty rates can vary greatly in each group. Furthermore, there are several instances where a mineral's average royalty rate does not match its description as an energy or non-energy mineral.
24. For example, already the Commission has had to allocate uranium – clearly an energy mineral – to non-energy minerals because its royalty rate is not in line with other energy minerals. Likewise, royalty rates applying to domestic coal are closer to non-energy rates than they are to energy rates.
25. The Commission declined to assess domestic coal as a non-energy mineral on the basis that the difference would be only marginally material. However, Tasmania does not consider that a materiality test should be applied in these circumstances. If revenue raising capacity is to be measured accurately, minerals should be automatically grouped on the basis of their royalty rate, and moving a mineral to the correct group should not have to be justified on the basis of materiality. This is assuming that the Commission should keep the energy/non-energy groupings at all, which is not necessarily the case.
26. Under a clean-slate, top-down approach, the Commission should look to what states do in raising royalty revenue. It is common policy to apply a stepped system of royalty rates to different minerals. This would suggest that minerals should be split into groups attracting similar royalty rates, rather than being grouped on the basis of broad mineral type. For example, a split into 'high royalty' and 'low royalty' groups would be more logical than the proposed 'energy' and 'non-energy' groups.
27. This approach would be more flexible and transparent and would make it easier to determine an appropriate level of disaggregation. It would mean the Commission would not have to make judgements about reallocating minerals between groups, which it currently does for the energy/non-energy components. When the Commission assesses a mineral in the 'wrong' group – as it has decided to do for uranium – the energy and non-energy descriptions become artificial.
28. We acknowledge that a purely royalty-based approach would require the Commission to collect information on actual revenue collected for every type of mineral. While we think that this would be a worthwhile exercise, because it would produce a better equalisation outcome, we are not sure whether every state could easily provide such data. Tasmania has sought advice from our mining department and we should be able to provide revenue data by mineral type, subject to some quality issues at the margin.

29. If the Commission decides to keep the energy and non-energy components, Tasmania considers that a reasonable equalisation outcome is only possible if the Commission is willing to move minerals between groups where their royalty rates better match another group, regardless of whether or not moving any particular mineral makes a material difference to the assessment.
30. In addition, the Commission may need to further disaggregate the energy and non-energy components where mineral royalty rates are significantly different to average rates in either group – for example, where a royalty rate applied to a mineral is much lower than for non-energy minerals, or higher than energy minerals.
31. An example is bauxite. Under the current proposal, bauxite falls into the non-energy component by default. However, two of the three bauxite-producing states apply royalty rates of between 7.5 and 15.3 per cent – much higher than other non-energy minerals, and even higher than most energy minerals. Clearly there is a case for assessing bauxite with energy minerals, if not assessing it as an entirely separate component. Table 3 below shows Tasmania’s estimate of the financial impact of assessing bauxite with energy minerals.

Table 3 – Estimated financial impact of assessing bauxite with energy group, 2005-06

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
\$ million	-7.0	0.6	-21.4	26.7	1.9	1.5	0.0	-2.3
\$ per capita	-1.0	0.1	-5.3	13.1	1.2	3.0	0.0	-10.8

32. Table 4 shows the estimated impact of a separate bauxite assessment.

Table 4 – Estimated financial impact of assessing bauxite separately, 2005-06

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
\$ million	5.3	1.9	-8.2	6.7	3.6	1.5	0.0	-10.7
\$ per capita	0.8	0.4	-2.0	3.3	2.3	3.1	0.0	-51.4

33. Either approach will have a material impact on the overall assessment, although, as mentioned earlier, we don’t think a materiality test should have to apply where a mineral is simply being moved to the most appropriate group, as would be the case in Table 3.

Data

34. According to Staff Discussion Paper 2007/03 *Proposed Methods for Revenue Assessments*, the Commission decided on a value of production approach to the mining revenue assessment partly because it is one of few measures for which robust data are available for energy and non-energy minerals. At the CGC staff-State meeting on 22 October 2008, Commission staff said that ABS data had improved in recent years.
35. We note that the ABS still cautions users that there are comparability issues around its commodity data. While we accept Commission staff's findings that the ABS data are the best available, we are concerned about the impact that this data has on the assessment, compared to the current method.
36. Tasmania estimates that the use of ABS data, rather than the currently used state-provided data, increases its assessed revenue raising capacity by over \$15 per capita for 2005-06. If the ABS data is the most robust data available, this would suggest that the data in the current assessment is of poor quality, something we find hard to believe given the substantial work that was undertaken between ABARE, CGC staff and state mining department officials to improve it for the 2004 Review.
37. We are aware that most of the impact is the result of the ABS's use of different valuation methods for a limited number of minerals, particularly bauxite. But we are nevertheless surprised at how large an impact this has had.