



Australian Government


Commonwealth Grants Commission

2015 REVIEW

PROPOSED ASSESSMENTS

STAFF DISCUSSION PAPER CGC 2013-07S

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Submissions sought by	<p>Due date: 31 January 2014</p> <p>Submissions should be emailed in Word format to secretary@cgc.gov.au</p> <p>Submissions of more than 10 pages in length should include a summary section.</p>
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INTRODUCTION

- 1 Under the 2015 Review work plan, the commission advised States it would send out papers addressing commission views and staff assessment proposals by the end of October 2013. There are 4 papers:
 - a commission paper on principles and architecture
 - a staff discussion paper covering broad implementation and methodological issues
 - a staff discussion paper covering specific assessment issues (including priority issues identified in the terms of reference)
 - a draft Quality Assurance Plan.
- 2 This staff paper covers the specific assessment issues. It sets out staff views on assessments and categories for the 2015 Review.
- 3 The commission has not adopted a clean slate approach as in the 2010 Review. Instead, it has started with the 2010 Review methodology and is reviewing that. Staff are proposing changes where the terms of reference require it, State circumstances have changed, better data have become available or where State submissions have persuaded us to do so. Not all aspects of assessments are addressed. Where they are not discussed, States should assume that commission staff are not proposing to make changes. For example, if a service delivery scale factor was assessed in a category in the 2010 Review, this will continue unless indicated otherwise in this paper.
- 4 This paper is organised in chapters. Each category or assessment has its own chapter. Assessments that span a number of categories (for example administrative scale, location etc) also have their own chapter.
- 5 The terms of reference identify a number of priority issues for this review. Staff proposals on the priority issues can be found at:
 - Chapter 6 — Priority Issue Mining revenue
 - Chapter 9 — Priority Issue National Education Reform Agreement (NERA)
 - Chapter 14 — Priority Issue DisabilityCare Australia
 - Chapter 20 — Priority Issue Transport infrastructure
 - Chapter 22 — Priority Issue Mining related expenditure
 - Chapter 26 — Priority Issue Indigeneity (including socio-economic status)
- 6 While staff have considered all State views when preparing these chapters, not every issue raised by States is explicitly mentioned. We have focussed on including major State views and views that are representative of a general view, rather than trying to include every State argument.

- 7 Please note, the proposals set out in this paper are initial staff views, which we have developed by drawing on and analysing State submissions received by the end of July 2013. Our proposals are not final. We wish to liaise with States and discuss whether the proposals can be improved to provide better equalisation outcomes. Multilateral meetings at officer level to discuss the proposals will be organised for the end of November.

Seeking State views

- 8 States are invited to submit comments on:
- specific issues raised in the paper
 - our analysis and the approach being proposed.
- 9 If States suggest assessment changes, the changes will need to be consistent with the commission's assessment guidelines. In particular, States will need to include a detailed discussion of the reliability and robustness of any new data they propose to use to measure disabilities.
- 10 Under the 2015 Review work plan, State submissions are sought by the end of January 2014. Staff will present State views on each assessment to the commission in February and March 2014. After considering State views, the commission will release a draft report outlining its position on each assessment in June 2014.

CHAPTER 1 – PAYROLL TAX

2010 REVIEW APPROACH

- 1 Payroll tax is a broad based tax imposed on the wages and related benefits paid by employers. The taxable remuneration includes wages, salaries, allowances, commissions, bonuses, employer superannuation contributions, fringe benefits, the value of shares and options, payments to some contractors, payments by employment agencies arising from employment agency contracts, remuneration paid by a company for company directors, employment termination payments and accrued leave.
- 2 In the 2010 Review, the commission calculated each State's revenue base using ABS data on Compensation of Employees (CoE). CoE is a broad measure of the remuneration paid. It covers wages, salaries, other cash benefits on behalf of employees (such as superannuation) and non-cash benefits.
- 3 An adjustment was made to exclude the earnings of employees in the general government sector, the defence force and embassies. It was not average policy to tax the earnings of employees of the Commonwealth (including those in the defence force and embassies) or of local government. Taxes on the earnings of employees of the State government sector are an internal budget transfer.
- 4 An adjustment was made to exclude payrolls below an average threshold, because it was average policy to have a tax free threshold.

STATE VIEWS

- 5 New South Wales said the adjustment for the tax free threshold should be removed because it added unnecessary complexity and because it contravened policy neutrality. It said removing the threshold would allow States' different thresholds to be averaged through the overall average tax rate in the same way differences in their tax rates were averaged.

ISSUES AND ANALYSIS

- 6 We think there is 1 issue for consideration in the 2015 Review.

Treatment of the tax free threshold

- 7 All States exempt payrolls below a tax free threshold — it is what States do. The level of the threshold varies by State. If the threshold adjustment was removed, the

average tax rate would apply to payrolls below the existing tax free threshold. States with proportionally more employment in small firms would be assessed as being able to tax the payrolls of those small firms at the average tax rate. This would overstate their revenue raising capacity.

- 8 The ABS is the current source of the data used to make the threshold adjustment. While it had raised concerns with the quality of the data in the past, it has recently indicated it is satisfied that the data are of sufficient quality for the commission's purpose.
- 9 Our analysis indicates the current threshold adjustment exceeds our proposed disability materiality threshold of \$30 per capita. Staff propose the adjustment remain, since it is a major feature of the State tax policy, the adjustment can be made reliably and it has a material impact on the GST distribution.

Staff propose to recommend the commission:

- continue the assessment method adopted in the 2010 Review, including:
 - an adjustment to exclude the earnings of employees in the general government sector
 - adjustments to exclude the earnings of employees in defence force and embassies
 - an adjustment to exclude payrolls below an average threshold.

CHAPTER 2 – LAND TAX

2010 REVIEW APPROACH

- 1 Land tax is imposed by all States¹ except the Northern Territory on the ownership of land used for income producing purposes. States generally exempt a person's principal place of residence and land used for primary production, general government and charitable purposes. Some States offer other exemptions, for example, Tasmania exempts land owned by pensioners.
- 2 A land holder is liable for land tax when their aggregate taxable land holding exceeds a tax free threshold. The tax payable is calculated on the combined value of the taxable land above the threshold and is subject to the State's tax rates.
- 3 The commission calculated each State's revenue base using taxable land values from State Revenue Offices (SROs). SROs provided land value and revenue data aggregated by land holder.
- 4 An adjustment was made to exclude revenue raised from metropolitan levies in Melbourne and Perth. The commission decided these levies were different to other land taxes and were not average policy. The revenues were assessed equal per capita in a separate component of the category.
- 5 An adjustment was made to account for differences in the progressivity of duty because States imposed land tax using progressive rates of tax.²
- 6 Most States levy land tax on the aggregated land holdings of individual owners. A 2% adjustment was made to increase the revenue base of the ACT because it did not aggregate the value of land when landowners held multiple holdings. The Northern Territory did not levy land tax, its revenue base was set equal to 0.6% of the sum of the other States.
- 7 The commission had residual concerns about the comparability of SRO data and so applied a medium discount (25%) to the assessment.

¹ As part of its tax reforms, the ACT has abolished land tax on commercial land and replaced it with an equivalent increase in municipal rates starting 2012-13. Land tax on residential investment properties (residential properties other than a person's principal place of residence) will remain.

² Land holdings below the average deduction threshold of \$0.3 million were assessed equal per capita and so did not influence the GST distribution. The commission did this because of State concerns about their ability to remove and report on non-taxable land below their own tax free threshold.

STATE VIEWS

- 8 Queensland expressed concerns about the current land tax assessment. It did not believe SROs were able to provide consistent and comparable data to the level of detail required. It suggested assessing land tax within a global revenue assessment or a broader indicator (such as the value of land in the ABS National Accounts).
- 9 Western Australia said States had policies to reduce the impact of year to year variations in land values (capping, averaging, changing exemption thresholds), which meant land values were not a good indicator of the capacity of the community to pay land tax in the short term. It was also concerned that the use of SRO data created a potential disincentive, because the level of compliance done affected a State's land tax base. It suggested assessing land tax using a global revenue assessment.
- 10 A separate paper deals with the issue of global revenue assessments.

ISSUES AND ANALYSIS

- 11 We think there are 2 issues for consideration in the 2015 Review:
 - the source of land value data
 - the treatment of metropolitan levies.

The source of land value data

- 12 There are 3 potential sources of land value data:
 - taxable land values from SROs, the commission's source of land value data in the 2010 Review
 - land values from State Valuers-General (VGs), the commission's source of land value data in the 2004 Review
 - land values from the National Accounts.
- 13 Table 2-1 shows there are problems with each data source. SRO data include taxable land only and land values are aggregated by owner. However, States are not able to provide reliable data for properties below their tax free threshold and some States have concerns that an assessment based on SRO data could give rise to perverse incentives in relation to compliance effort. VG and National accounts data allow an assessment to be made for the Northern Territory, but they include principal places of residence (which are not taxable) and their land values are not aggregated by owner. In addition, the National accounts data do not offer sufficient detail to support a progressivity adjustment.
- 14 In the 2004 Review, the commission used VG data and it engaged the Australian Valuer-General to investigate and report on any material differences in valuation practices. An adjustment was made to remove principal places of residences, using ABS data on the proportion of renter households in each State. This adjustment

would be marginally material under our proposed data materiality threshold of \$10 per capita.

Table 2-1 Alternative sources of land value data

Issue	SRO data	VG data	National accounts data
Scope of the data	Includes only taxable land values. No data available for the Northern Territory.	Includes principal places of residence, which are not taxable.	Includes principal places of residence, which are not taxable.
Aggregation of land values	Data aggregates landholdings by owner. Some SROs need to make adjustments to their data with respect to joint ownership. The ACT does not aggregate landholdings.	Data do not aggregate landholdings by owner.	Data do not aggregate landholdings by owner.
Progressive rates of tax	Data can support a progressivity adjustment.	Data can support a progressivity adjustment.	Data do not support a progressivity adjustment.
Tax free threshold	SROs cannot provide reliable data below their own thresholds.	Data available.	Data do not support a threshold adjustment.
Policy neutrality	SRO data can be contaminated by differences in State policies (for example, compliance efforts).	Not affected by differences in compliance effort.	Not affected by differences in compliance effort.

Source: Analysis by commission staff.

- 15 In the 2010 Review, the commission concluded the SRO data were closer to the way States actually taxed land and were conceptually superior. SROs were asked to adjust their data to achieve a common treatment of joint ownership and to provide annual data rather than averaged data. The commission made adjustments for the 2 Territories, because the ACT did not aggregate land holdings and because the Northern Territory could not provide data.
- 16 The commission has not used National accounts data because it does not support a threshold adjustment or a progressivity adjustment.
- 17 While States said there were problems with using SRO data, most preferred SRO data to VG data. Queensland preferred VG data. New South Wales and Western Australia preferred a broad indicator assessment.
- 18 In the 2010 Review, the commission considered SRO and VG data and decided there were advantages and disadvantages with both data sources. It made an on balance decision to use SRO data. Staff would be interested in whether there have been

improvements in the VG data³, that might cause the commission to change its mind as to which is the better source of data.

The treatment of metropolitan levies

- 19 States raised \$13 per capita in revenue from these levies in 2011-12. Staff have proposed an approach to deal with unique revenues. The approach is to ask whether the revenues are similar in nature to other revenues. If they are, they would be assessed with those similar revenues. If not, they would be separately assessed. If a material and reliable assessment cannot be made, the revenues would be classified to the Other revenue category and assessed equal per capita.
- 20 These levies are an impost on land values and we consider them to be similar in nature to other land taxes. We propose the commission include them as land taxes and differentially assess them.

Staff propose to recommend the commission:

- continue the assessment method adopted in the 2010 Review with one exception, that it differentially assess metropolitan improvement levies
- source its land data from SROs, unless States can provide evidence of an improvement in Valuers-general data
- make adjustments for:
 - the progressivity of tax rates
 - the ACT because it does not aggregate values by landholder
 - the Northern Territory because it does not levy land tax
 - the comparability of SRO data by applying a medium discount (25%).

³ In particular, whether VG data are able to identify and remove principal places of residence.

CHAPTER 3 – STAMP DUTY ON CONVEYANCES

2010 REVIEW APPROACH

- 1 Stamp duty on conveyances is a tax on the transfer of ownership of property. The tax is based on the value of property transferred and is paid by the purchaser.
- 2 The concept of taxable property is very broad, comprising both real property (such as land, houses, apartments, shops, factories, offices etc) and non-real property (such as copyrights, goodwill, patents, partnership interests and options to purchase). The category includes duty raised from the sale of major State government owned assets, but excludes duty raised on the transfer of shares and marketable securities.
- 3 In the 2010 Review, the commission calculated each State's revenue base using the value of transactions subject to duty. Each State provided data on its value of property transferred. Data on New South Wales's Vendors duty⁴, first home owner bonus payments and refunds were removed from the revenue base.
- 4 A data adjustment was made to exclude revenue from corporate reconstructions and revenue from the sale of major State assets. Most States refund the duty collected or exempt corporate reconstructions to encourage economic reform. Previous terms of reference directed that these revenues should not affect the GST distribution. Revenue from the sale of State assets reflects State policies on the ownership of assets. These 2 revenue sources were assessed equal per capita in a separate component of the Conveyance category.
- 5 Data adjustments were also made for differences in a range of property subject to duty. The commission engaged a consultant to identify the differences that were material and for which an adjustment was warranted.
- 6 A disability adjustment was made to account for differences in the progressivity of duty because States imposed stamp duty on conveyances using progressive rates of duty.

ISSUES AND ANALYSIS

- 7 We think there is 1 issue for consideration in the 2015 Review.

⁴ New South Wales ceased collecting Vendors duty in 2005-06.

Adjustments for differences in scope

- 8 In the 2010 Review, the commission engaged a consultant to identify material differences between States in the type of property subject to duty. The commission made adjustments for:
- ‘Off the plan’ purchases. Most States levied duty on ‘off the plan’ purchases, a 2.75% adjustment was made to increase the revenue base of Victoria because it did not.
 - Transfers of entities that owned land. Most States levied duty on transfers of entities that owned land. A 2% adjustment was made to increase the revenue bases of Victoria and Tasmania because they levied duty on the transfer only when the land component was more than a prescribed proportion of the entity’s assets.
 - Unit trusts. Most States levied duty on unit trusts. A 3% adjustment was made to reduce the revenue bases of Queensland, Western Australia and South Australia because they levied duty on a wider range of unit trusts.
 - Non-real property transactions. States were progressively abolishing duty on non-real property transactions, but most continued to impose a duty and an adjustment was made to increase the revenue bases of States that did not. By the 2013 Update, most States had abolished the duty and the commission removed the adjustment. States that continued to impose the duty provided data to allow the commission to remove the transactions from their revenue bases.

States views are sought on:

- which data adjustments should be made and how they should be made
- your State’s policy in relation to ‘off the plan’ purchases, transfers of entities that owned land, unit trusts and non-real property.

Staff propose to recommend the commission:

- continue the assessment method adopted in the 2010 Review
- this would include:
 - an adjustment to exclude corporate reconstructions and sales of major State assets. These would continue to be assessed equal per capita
 - an adjustment for the progressivity of tax rates
 - pending State views, adjustments for differences in the scope of transactions subject to duty.

CHAPTER 4 – INSURANCE TAX

2010 REVIEW APPROACH

- 1 The Insurance tax category includes stamp duties on various forms of insurance that are mostly levied on premiums. They are imposed on insurance companies, who pass the burden onto their customers. Insurance taxes are narrowly based transaction taxes.
- 2 In the 2010 Review, the commission calculated each State's revenue base using Australian Prudential Regulation Authority (APRA) data on total premiums paid to insurers on the risks insured in each State. The APRA data included premiums paid to direct (private sector) insurers and public insurers.
- 3 An adjustment was made to remove premiums paid in relation to workers' compensation insurance and reinsurance, since the average policy was to exempt these types of insurance.
- 4 An adjustment was made to exclude fire and emergency services levies collected by insurance companies. The commission decided these levies were user charges rather than a transactions tax and included them with other user charges in the Other revenue category.

STATE VIEWS

- 5 New South Wales quoted the Henry Review (*Australia's Future Tax System*), which concluded insurance taxes were inefficient. It said this meant the size of the revenue base was influenced by State policies on rates of duty. It said the commission should make an elasticity adjustment to account for these policy effects. The issue of elasticity adjustments is considered in a separate paper.
- 6 A number of States suggested assessing insurance tax using a global revenue assessment. The issue of a global revenue assessment is considered in a separate paper.

ISSUES AND ANALYSIS

- 7 We think there are 3 issues for consideration in the 2015 Review:
 - should the commission exempt workers' compensation premiums?
 - should the commission include public insurer premiums?
 - is the assessment material?

Should the commission exempt workers' compensation?

- 8 Staff have proposed an approach to deal with unique revenues. The approach is to ask whether the revenues are similar in nature to other revenues. If they are, they would be assessed with those similar revenues. If not, they would be separately assessed. If a material and reliable assessment cannot be made, the revenues would be classified to the Other revenue category and assessed equal per capita.
- 9 Queensland and South Australia⁵ currently impose a tax on workers compensation insurance. We consider the tax is similar in nature to other insurance taxes. We propose the commission stop removing workers' compensation premiums from the revenue base.

Should the commission include public insurer premiums

- 10 Following a change to its statistical publications, APRA has informed the commission it will no longer provide data on total premiums paid to public insurers⁶, but will continue to provide the data for direct insurers.
- 11 If public insurer data are to be included, the commission will need to source public insurer premium data from States. The data it would seek would be total premiums less premiums received from general government sector agencies.⁷

Is the assessment material?

- 12 We propose adopting a disability materiality threshold of \$30 per capita. The 2013 Update assessment exceeded this threshold for Tasmania (\$36 per capita) and almost exceeded it for the Northern Territory (\$29 per capita).
- 13 The adjustments proposed for the category could lead to it falling below the materiality threshold. If that happened the commission could remove the category by classifying the revenues to the Other revenue category.

⁵ South Australia exempts from duty workers' compensation insurance in relation to workers under the age of 25.

⁶ Public insurers are those that are controlled, or wholly owned, by a State government, irrespective of whether the assets insured are government or private assets. The main classes of insurance taken out with public insurers are workers' compensation insurance, compulsory third party motor insurance and insurance for public sector agencies.

⁷ In most States, general government sector agencies contribute to a self-insurance fund managed either by the Treasury or another public sector agency. Any duty on the premiums paid by general government sector agencies under such arrangements is an internal budget transfer and is excluded from category revenue. For consistency, any premiums paid to public sector insurers by general government agencies should also be excluded.

Staff propose to recommend the commission:

- providing it is still material, continue the assessment method adopted in the 2010 Review with one exception. It would cease the adjustment to exclude premiums relating to workers' compensation
- the revenue base would be total premiums paid to insurers on the risks insured in each State with adjustments to exclude:
 - reinsurance premiums
 - fire and emergency services levies collected by insurance companies.

CHAPTER 5 – MOTOR TAXES

2010 REVIEW APPROACH

- 1 The Motor taxes category includes annual motor vehicle registration, traffic improvement and number plate fees, and stamp duties collected when new vehicles are registered and ownership of used vehicles are transferred. The category also includes revenues raised by the Commonwealth under its Federal Interstate Registration Scheme (FIRS).
- 2 The category does not include duty collected on compulsory third party insurance premiums or revenue from driver licence and permit fees. The duty collected on compulsory third party insurance premiums is assessed in the Insurance tax category. Revenue from driver licence and permit fees are assessed in the Other revenue category.
- 3 The commission assessed revenue from motor taxes in 3 parts: light vehicle registrations, heavy vehicle registrations (which include the FIRS revenues) and stamp duty on the transfer of new and used vehicles. The States supplied data that enabled the commission to separate motor taxes into the 3 parts.
- 4 In the 2010 Review, the commission calculated each State's revenue base using:
 - for light vehicle registrations, ABS data on the number of passenger and light commercial vehicles registered in each State
 - for heavy vehicle registrations, ABS data on the number of articulated trucks and heavy rigid trucks registered in each State
 - for stamp duty on transfers, State data on the value of new and used vehicles transferred in a year.⁸

Staff propose to recommend the commission:

- continue the assessment method adopted in the 2010 Review.

⁸ Victoria and the Northern Territory are not able to provide the value of vehicles transferred in a year. Their data are estimated by dividing the revenue they collect by their published rates of tax.

CHAPTER 6 – PRIORITY ISSUE MINING REVENUE

2010 REVIEW APPROACH

- 1 The Mining revenue category includes mining royalties levied on mining production.
- 2 The category also includes grants in lieu of royalties, payments received under revenue sharing arrangements with the Commonwealth. Western Australia receives a share of the revenue from offshore oil and gas production (predominantly from the North-West Shelf) and the Northern Territory receives a share of the revenue from uranium production.
- 3 The commission assessed mining in 3 parts: grants in lieu of royalties, high royalty rate minerals (comprising oil and gas, lump iron ore, export coal and bauxite) and low royalty rate minerals.
- 4 In the 2010 Review, the commission calculated each State's revenue base using:
 - for grants in lieu of royalties, the actual revenue received
 - for high royalty rate minerals, State data (supplemented by some ABS data) on the value of oil and gas, lump iron ore, export coal and bauxite sold in a year
 - for low royalty rate minerals, State data (supplemented by some ABS data) on the value of other minerals sold in a year.

GST DISTRIBUTION REVIEW

- 5 The terms of reference for the 2015 Review ask the commission to have regard to the GST Distribution Review's recommendations when developing a new mining assessment.
- 6 The GST Distribution Review said mining should continue to be equalised on the same basis as other own-source revenue (Finding 7.1). However, it noted the current 2 tier assessment could produce excessively large GST share effects when a mineral moved between groups (Finding 7.2). It recommended the commission and States develop a new mining assessment that avoided such GST effects (Recommendation 7.2).

STATE VIEWS

- 7 New South Wales said achieving an assessment that was policy neutral would be difficult given the tax base is dominated by 2 States. It suggested it might be possible to reduce the sharpness of the impact of policy changes by moving to a graduated

assessment structure with a number of royalty tiers, rather than the current 2 tier structure.

- 8 Victoria said the mining assessment was comprehensively considered in the 2010 Review and it was not clear that a new assessment was required. Its concern was that mining was a significant source of State revenue and a material driver of differences in State fiscal capacities. It said mining revenue should continue to be fully assessed when determining fiscal capacities. It acknowledged the difficulty of creating a perfectly policy neutral assessment, due to the uneven distribution of resources. One aspect of policy neutrality was *spill over effects*.⁹ It accepted a more detailed assessment (for example, separate assessments of iron ore and coal) could remove the influence between unrelated resources, but said this would reverse the simplification achieved in the 2010 Review. If a new assessment was required, it suggested a single category assessment or an actual per capita assessment. It also opposed suggestions to discount the mining assessment, because those suggestions had not been justified.
- 9 Queensland said reforming the mining assessment should be a priority of the 2015 Review. The reform should focus on improving policy neutrality and removing any *grant design inefficiency*¹⁰ and investigating the appropriate level of discount. Queensland said mining had unique attributes which meant it should be treated differently from other revenue sources. Some commentators viewed royalties as a payment for a State asset and it noted the commission did not redistribute the proceeds of other State assets. Queensland said mining development can be problematic, requiring difficult policy choices and trade-offs against other industries. States incurred costs in developing and regulating their mining industry. Queensland said investment by States in their mining industries can be linked to increased mining capacity — if this investment is considered a policy choice, the royalty revenue flowing from it should also be treated as a policy choice. Queensland said the incentive to develop the mining industry needs to be preserved, but equalisation reduced those incentives because States only retained their population share of any increased royalties. It said a starting point of 100% equalisation was not appropriate and suggested a more appropriate starting point would be a discount of 50%. It also suggested assessing mining as a single category as it would simplify the assessment and remove grant design inefficiencies in the existing 2 tier approach.

⁹ Victoria provided an example of a spill over effect. If Queensland raised its coal royalty rate, it would increase the average royalty rate for the high royalty group. As a result, Western Australia would be assessed to have an increased revenue raising capacity from iron ore, despite the fact that the prevailing value of iron ore remained unchanged.

¹⁰ A grant design inefficiency is a flaw in an assessment method that would allow a State to influence its relativity by changing its expense or revenue policies (apart from any effect of these policies on the average). Queensland said there was a grant design inefficiency if a State could lose more in GST funding than it gained from royalties.

- 10 Western Australia also argued that mining should be treated differently from other sources of State revenue and either excluded or discounted. It supported the need for a new assessment, one which was far less sensitive to State policy changes and which avoided grant design inefficiencies that exceeded 100%. It proposed a discount of at least 25%, which would be applied to an assessment based on actual revenues, a mineral by mineral assessment or a 2 tier assessment (hydrocarbon and non-hydrocarbons). It opposed a single category assessment or assessments that combined iron ore and export coal into the same group as it believed they would give a poor equalisation outcome. Such assessments would not recognise differences in revenue raising capacity across different minerals. It said a discount should also be applied to grants in lieu of royalties to recognise the costs it incurred to establish the North West Shelf project.
- 11 South Australia said the skew in the location of minerals provided challenges because of the potential conflict between policy neutrality and what States collectively do. It thought some mining operations offered a greater revenue raising capacity than others (relating to the operating profitability of mines) and believed a single assessment could be made if a reliable profitability indicator was available. Alternatively, an assessment could be conducted on a disaggregated basis by mineral or type of mine (underground or open cut). However, the skew of minerals meant a mineral by mineral approach had policy neutrality concerns. If that approach was ruled out, it suggested an assessment using profitability weights based on royalty rates¹¹ or an assessment based on groups of commodities aggregated according to royalty rates.
- 12 Tasmania noted the mining assessment had always been problematic and contentious. The tax base was highly skewed towards a couple of States, giving rise to policy neutrality issues, and was highly redistributive. It believed the more disaggregated the assessment the more it would capture differences in revenue raising capacity, but the more prone it would become to policy neutrality issues. While value of production tended to reflect how States imposed royalties, it did not recognise differences in extraction costs relative to a profitability measure. The 2010 Review method tried to balance revenue neutrality with the need to capture the relative revenue raising capacities of States with strong mineral bases in the high value minerals. Tasmania noted a broader indicator approach remained a valid alternative. While not advocating a specific approach, it rejected approaches that further diminished the capacity of the assessment to reflect differences in revenue raising capacities — including a single rate approach, an approach that used value of mining production as a broad indicator, an approach that used gross value added as a broad indicator or an actual per capita approach. The first three approaches would

¹¹ South Australia said royalty rates were set with regard to expected profitability, so rates of royalty relative to the overall average could be used as primary profitability conversion factors.

not recognise that some minerals attracted a higher royalty rate than others. The fourth approach would leave policy contamination embedded.

- 13 The ACT supported the development of a new assessment to address the current grant design inefficiency. It said any revised method should continue to fully equalise mining royalties, given the significance of this revenue source to State budgets. A new assessment needed to capture the variations in royalty rates by mineral, capture differences in the distribution of minerals, flexibly deal with increases or decreases in royalty rates (without creating grant design inefficiencies) and be premised on reliable and comparable data.
- 14 The Northern Territory said developing an assessment that was consistent with the supporting principles of what States collectively do and policy neutrality has consistently been a challenge for the commission. It believed the existing 2 tier approach was an example of where simplification went too far in the 2010 Review and it did not achieve the desired policy neutral assessment. It saw merit in increasing the number of groups (either by royalty rate or mineral type) as a means of avoiding spill over effects — whereby changes in the royalty rate for one mineral affected other minerals. It suggested using the Australian Bureau of Statistics' groupings: fuel minerals (including coal), metallic minerals (including iron ore), industrial minerals and construction minerals.
- 15 In summary, States concerns appear to be:
 - mining royalties should be treated differently from other revenue sources
 - the mining assessment should provide appropriate incentives to resource States to develop and expand their mining sectors
 - the mining assessment should adequately reflect differences in States' revenue raising capacity
 - the mining assessment should be sufficiently policy neutral.

ISSUES AND ANALYSIS

- 16 Staff consider the appropriate assessment of mining royalties is an area where the commission has to address several complex questions and it is an assessment which would benefit from close consultation with the States.
- 17 We consider the main issue is finding an appropriate balance between fiscal capacity, what States collectively do and policy neutrality. There are also 3 other issues arising from State submissions:
 - Should the commission treat royalties as the price for a State asset?
 - Should the mining assessment provide incentives to resource States to develop and expand their mining sectors?
 - Should the mining assessment be discounted?

Finding an appropriate balance between fiscal capacity, what States collectively do and policy neutrality

18 Table 6-1 shows the evolution of the mining assessment since the 1981 Review.

Table 6-1 The mining assessment

Review	Category/component	Basis of assessment
1981	Offshore petroleum and gas Black coal Other minerals	Actual per capita Adjusted value added Adjusted value added. An adjustment was made to Tasmania's revenue base because of the profitability of some of its mines.
1982	Offshore petroleum and gas Black coal Other minerals	Actual per capita Adjusted value added Adjusted value added. An adjustment was made to New South Wales' revenue base because of the lags between the silver, lead and zinc mining activities and the payment of royalties. An adjustment was made to Queensland's and Western Australia's revenue bases to account for the borrowing costs associated with infrastructure expenditure. The Tasmania adjustment from the 1981 Review continued to be made.
1985	Uranium Offshore petroleum and gas Black coal Other minerals	Actual per capita Actual per capita Adjusted value added Adjusted value added. The 4 adjustments from the 1982 Review continued to be made. An adjustment was also made to the Northern Territory's revenue base because of constraints on its ability to raise revenue because of long-term agreements entered into by the Commonwealth and Territory with mining companies prior to self-government.
1988	Uranium Offshore petroleum and gas Black coal Gold Other minerals	Actual per capita Actual per capita Adjusted value added. An adjustment was made to account for the profit from the haulage of Black coal in Queensland. Adjusted value added. Adjusted value added. Only 3 of the 5 adjustments from the 1985 Review remained. The adjustments for New South Wales and Tasmania were discontinued.
1993	Black coal, gold and other minerals combined into an amalgamated category. Uranium and offshore petroleum and gas were treated as SPPs	Adjusted value added, with deductions for average exploration costs (averaged over 5 years) and average capital expenditure (averaged over 10 years) and a price elasticity adjustment (3%). An adjustment continued to be made to account for the profit from the haulage of Black coal in Queensland Actual per capita.

Table 6-1 The mining assessment (continued)

Review	Category/component	Basis of assessment
1999	An amalgamated category Uranium and offshore petroleum and gas were treated as SPPs	Adjusted value added. The adjustments from the 1993 Review were retained, except off-lease exploration costs were excluded. Actual per capita
2004	Oil and gas Domestic coal Export coal – open cut Export coal – underground Value based minerals Volume based minerals Grants in lieu of royalties	Value of production Value of production Value of production Value of production Value of production Volume of production Actual per capita
2010	Grants in lieu of royalties High royalty minerals Low royalty minerals	Actual per capita Value of production of oil and gas, export coal, lump iron ore and bauxite Value of production of other minerals

Source: Commission reports.

- 19 We consider that the equalisation objective requires the commission to develop an assessment which recognises that the uneven interstate distribution of minerals and the differential royalty rates States on average impose on them creates differences in State fiscal capacities.
- 20 If the interstate distribution of minerals was more uniform, a mineral by mineral assessment would capture these differences and allow the GST distribution to reflect States' differential fiscal capacities in their GST shares. There would be secondary questions, like the possible need for elasticity adjustments or the need to consider differential profitability that have been raised in the past and might need to be addressed.
- 21 However, the interstate distribution is very uneven and so a mineral by mineral assessment would create a high degree of potential policy non-neutrality. For example, a State with a pre-dominance of a mineral could, by changing its royalty rate, be able to exert a significant influence on its GST share.
- 22 To address this non-neutrality, the commission has grouped minerals in the past. Within a group the interstate distribution is more even, diluting the policy influence of any one State. While grouping reduces non-neutrality it does not remove it. It also means the assessment no longer reflects what States do because it applies the average royalty rate of minerals in a group rather than the individual rates States actually apply. As a consequence, differences in fiscal capacities are not as fully recognised as in a mineral by mineral assessment.

- 23 The commission has had to make judgements about what constitutes the best compromise between achieving its objective of equalisation, and doing so in a way that reduces non-neutralities.
- 24 We consider the same issue confronts the commission in this review.
- 25 While State submissions raised a number of assessment options we would like to, in effect, step back from their consideration at this time and seek advice from States on how we might advise the commission on the likely importance of non-neutralities in practice. For example if there was a mineral by mineral assessment a State with a pre-dominance of that mineral could increase its GST share by reducing its own royalty rate, but would be worse off in terms of its own budget revenues. How likely are States to use non-neutralities if there were a mineral by mineral approach?
- 26 Staff accept States might find it difficult to provide advice in this area, but we believe that we should consult them to be in the best possible position to advise the commission. States might assist us, for example, to understand what if any lessons could be learned from recent decisions by some States to raise royalties even though that could lead to large negative GST consequences.

Staff seek State views on:

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

- 27 If, following the receipt of State advice, the commission retains the position it reached in the 2010 Review and seeks an assessment approach which moderates potential non-neutralities, it appears to us that there are two broad approaches. The commission could either
 - introduce a grouping of minerals, although not necessarily along the lines of that adopted in the 2010 Review
 - move to an ‘external’ standard for royalty rates.
- 28 Under either approach there are a range of subsidiary implementation questions to answer. In the grouping approach, the primary ones are how to group minerals (how many groups, which minerals) and how, if at all, that grouping might adjust to material changes in State policies between reviews. For example, should the commission freeze the groups for the duration of the review?
- 29 In the case of an ‘external’ standard, we mean a standard not based on what States collectively do. The primary question is which standard should the commission adopt — a standard based on history in Australia or one based on international experience.

- 30 Staff seek State advice on the reasoning which leads them to favour one or other of these two approaches including views on the range of more detailed implementation issues they each raise.

Staff seek State views on:

- the advantages or disadvantages of a grouping approach? If a grouping approach is adopted:
 - which classification of minerals should the commission use?
 - what criteria should the commission use to decide between grouping based on royalty rates or grouping based on types of minerals?
 - how many groups should it use and which minerals should be grouped together?
 - how could the commission improve the policy neutrality of the assessment? Should it freeze the groups for the duration of the review?
- the advantages or disadvantages of an external standard? If an external standard is adopted:
 - whether it should be based on historical State royalty rates or on international experience?
 - how often should the external standard be updated?

- 31 We accept that some States may favour neither, preferring another solution, including options raised in earlier submissions. We welcome alternate solutions, but are not asking States to repeat what they have already submitted — a simple nothing further to add will suffice in these circumstances.
- 32 We have adopted this approach because the mining assessment will require the commission to exercise a large degree of judgement and we think the commission would want to exercise that judgment with the fullest possible State involvement.

Should the commission treat royalties as the price for a State asset?

- 33 We note the GST Distribution Review considered this issue. In its final report it said there was some merit in the argument, but the reality was that it was a long standing practice for Australian governments to treat royalties as recurrent revenue and make royalties available to meet current expenditure needs. If the royalties were treated as an asset sale, it would require the minerals to be recognised as assets on State balance sheets. The GST Distribution Review concluded that it was not clear the combination of these changes would materially alter the equalisation outcomes over time.

- 34 We propose the commission treat royalties like other State revenues because States and the Statistician treat them as recurrent revenue and make them available to meet recurrent expense needs.

Should the mining assessment provide incentives to resource States to develop and expand their mining sector?

- 35 The commission has addressed the question of assessments being directed towards horizontal fiscal equalisation (HFE) and other policy objectives in its paper on *Equalisation objectives and supporting principles* (paragraph 13) and concluded its terms of reference direct it solely to achieve HFE.

Should the mining assessment be discounted?

- 36 Queensland and Western Australia said the commission should apply a discount to the mining assessment, either to reflect costs incurred in mining development not captured in other assessments or because of concerns about the mining royalty assessment methodology.
- 37 The issue of capturing the costs of mining development is dealt with in another section of this discussion paper.
- 38 In relation to concerns about the mining methodology, the commission's assessment guidelines specify when a discount should be applied.
- Where a case for including a disability in a category is established but the commission is unable to make a suitable assessment of its impact, one option is to discount the impact that has been determined.
- 39 We consider the commission should consider whether a discount is warranted once an assessment method has been determined. If, at that point, the commission has concerns about either the reliability or neutrality of the assessment, it would be in a position to determine if a discount is required and, if so, its size.

CHAPTER 7 – OTHER REVENUE

2010 REVIEW APPROACH

- 1 The Other revenue category is a residual revenue category, comprising revenues that the commission decided should not influence States' GST distributions. These are:
 - revenues for which a reliable and material assessment could not be developed
 - revenues collected from taxes that are not part of average revenue raising policies, such as taxes on business that are being phased out but which remain in some States
 - a balancing item to ensure the commission's total revenues equal those reported in ABS government finance statistics (GFS).
- 2 The revenue sources included in the category were:
 - gambling taxes
 - most user charges¹²
 - fines
 - interest and investment income
 - contributions from government businesses (dividends)
 - other miscellaneous revenue. These include capital revenue, revenue from assets acquired at below market value and revenue from taxes that are no longer average policy.
- 3 The commission assessed revenues in this category on an equal per capita (EPC) basis— that is, each State was treated as if it could raise the average per capita amount of these revenues.

STATE VIEWS

- 4 South Australia said emergency service levies should be assessed as property taxes because they were not true user charges. Most States had moved away from a 'fire services levy' on household insurance premiums. Emergency services levies were now generally based (or will be based) on the capital or improved value of properties or variants of this base.

¹² User charges not included in the Other revenue category were hospital user charges, public transport fare revenue and user charges, public housing rents and other charges and electricity and water charges. These user charges were classified to expense assessments.

ISSUES AND ANALYSIS

- 5 We have considered whether each of the revenues currently classified to the category should remain in the category and be assessed EPC. Three revenue sources (gambling taxes, fire and emergency levies and user charges) warrant examination.
- 6 In addition, we have considered whether the balancing item should be retained in the category.

Gambling taxes

- 7 **Level of activity.** We have examined whether we could use the level of the gambling activity in each State (or revenue collected adjusted for differences in States' rates of tax) as the basis of an assessment. This is the approach we use in most revenue assessments.
- 8 The difficulty with this approach is the variability of State gambling policies. We lack data quantifying the nature and impact of many of the policy differences affecting the level of gambling activity in each State. For example, each State has controls on the number and location of poker machines (which comprise about 60% of all gambling taxes). Their controls lead to large differences in the number of gaming machines per capita. The literature indicates poker machine gambling is strongly correlated with the number of poker machines per capita. Therefore, State poker machine controls are likely to affect the level of poker machine activity and amount of revenue raised.
- 9 Similarly, States control casino numbers and operations (responsible for a further fifth of gambling taxes). We do not think it is feasible to reliably remove the effect of policy differences on the level of casino gambling activity in each State. We conclude that the level of activity is too policy influenced to be a reliable measure of revenue capacity.
- 10 Other forms of gambling include lotteries, scratch tickets, lotto, racing and sports betting. There was some evidence these forms of gambling were less affected by State policy.
- 11 We tested whether a gambling assessment based on the level of gambling activity in each State would produce a material assessment. The resulting assessment redistributed slightly more than our proposed materiality disability threshold of \$30 per capita. However, we concluded the results should be discounted in light of concerns about impact of State policy differences. Even with a modest discount, an assessment would not be material.
- 12 **A socio-demographic composition (SDC) approach.** We examined whether differences in States' demographic composition could be used to construct a gambling assessment. There are considerable data from gambling prevalence studies that indicate different forms of gambling appeal to different segments of the

population. However, data that relate actual spending or loss to demographic characteristics are much rarer.

- 13 We attempted to find evidence and construct assessments for each major form of gambling by looking for evidence that each form of gambling appeals to different population groups. Our attempts to find suitable evidence and construct gambling assessments were not successful:
 - For poker machine gambling, we were unable to find evidence to reliably associate gambling activity with demographic characteristics. Some studies have shown this form of gambling is more prevalent in the lower socio-economic groups, but there is also conflicting evidence. We re-examined data provided by Queensland in the last review linking population density to poker machine gambling. Even with generous assumptions about the strength of a link, an assessment would be unlikely to exceed our proposed disability threshold of \$30 per capita. Research reported by the Productivity Commission in its *2010 Review of Gambling* indicated about 40% of all poker machine gambling was attributable to problem gamblers. They are a small proportion of the population, but we are not aware of data that would allow us to link problem gamblers to particular demographic groups.
 - We did not find data to link casino gambling activity to particular demographic groups. Compounding the problem, a significant proportion of casino gambling is undertaken by 'high rollers', many of whom are overseas visitors.
 - Similarly, we did not find data linking other forms of gambling activity to particular demographic groups.
- 14 **A broad indicator approach.** We examined whether a broad indicator could be found that would capture State's capacity to raise gambling taxes.
- 15 The commission used household income as a broad gambling indicator in the 2004 Review (subject to a 50% discount due to conflicting evidence of whether it was an appropriate measure). We have found no evidence that income is an appropriate measure of gambling activity. In the case of poker machines, there was some evidence that low income predicted higher levels of gambling although the evidence was not sufficiently robust to use. Prevalence studies suggest that other forms of gambling, such as horse racing or casino gambling may be associated with higher incomes but, again, the effect could not be quantified (and could potentially offset the influence of income on poker machine gambling, if that could be proven).
- 16 The only data we could find to construct an assessment was work undertaken by the Productivity Commission in 1999 on the gambling by different age cohorts.¹³ An assessment of gambling revenue using these data would redistribute about \$10 per

¹³ Technical paper 10 *Gambling Revenue*, found at http://www.pc.gov.au/data/assets/pdf_file/0006/13686/technicalpaper10.pdf

capita for one State and about \$5 per capita or less for all others. Given this observation and our concerns about the quality of the data and their currency, we do not think a reliable and material assessment could be constructed using them.

- 17 Overall, we have concluded there is insufficient evidence to construct a reliable or material assessment of gambling revenue.

States views are sought on:

- whether there are data or approaches that could support both a conceptual case and material assessment of gambling revenue.

Fire and emergency services levies

- 18 States raised \$81 per capita in revenue from these levies in 2011-12. South Australia said that most States raise these levies by applying a charge to property owners. It suggested assessing these revenues using improved capital values (and possibly mobile property values).
- 19 Staff have proposed an approach to dealing with unique revenues. The approach is to ask whether the revenues are similar in nature to other revenues. If they are, they would be assessed with those similar revenues. If not, they would be separately assessed. If a material and reliable assessment cannot be made, the revenues would be classified to the Other revenue category and assessed EPC.
- 20 Our understanding is the levies have a fixed and variable component, with the variable component based on a mix of property value, property size, land use and property location.
- 21 If these levies were considered to be similar to land taxes, we would include them in the Land tax category. At that point, we would consider whether our current Land tax base (the value of income producing land) would need amending because of the expanded scope of revenues included in the category. It is not clear to us whether the levies are similar in nature to land taxes or whether a separate assessment is required.
- 22 South Australia said our land tax measure was not an appropriate indicator, it suggested an assessment based on improved capital values. We do not have data on improved capital values, however, we know an assessment would be material if we used either our Land tax assessment or the ABS' value of land from its National Accounts publication.

States views are sought on:

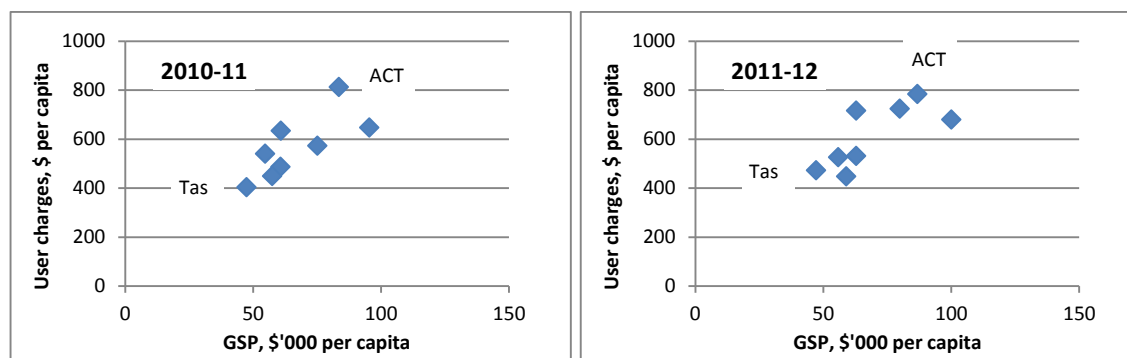
- the basis on which States raise fire and emergency services levies
- whether these levies are user charges or taxes
- whether these levies are similar to land taxes and should be assessed with them
- whether States have data that would allow an assessment based on the capital or improved value of properties.

User charges

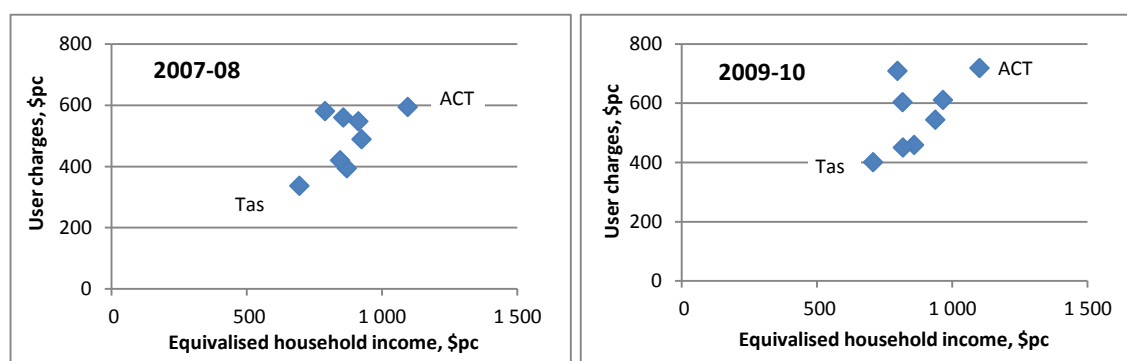
- 23 States collect revenue from ‘sale of goods and services’. This revenue is comprised of a wide range of charges including fire and emergency levies, court fees, property title fees, registration of births, death and marriages, charges associated with specific service functions such as national parks and various licence and permit fees. In total, user charges classified to the Other revenue category comprise a significant source of State revenue, amounting to \$568 per capita in 2011-12.
- 24 Because each user charge type is potentially derived from a different population group, we examined whether we could construct a differential assessment for each type of user charge. This approach was not successful. It was difficult to establish the basis on which an assessment could be made. In cases where a basis could be established, reliable data were often not available (for example, national parks user charges) or a material assessment in aggregate did not result. We were also concerned that a piecemeal approach may overlook potentially offsetting assessments for those user charges where an assessment was not feasible.¹⁴
- 25 We examined whether a differential assessment could be made to user charges in total. Hard evidence to construct such an assessment is lacking. In the 2010 Review, some States argued that user charge revenue capacity was related to the size of State economies or the level of disposable income. If this can be established, an assessment may be possible.
- 26 We have examined both gross state product (GSP) and equivalised household¹⁵ income to look at whether there is empirical evidence of a relationship. The results for the most recent 2 years of data are shown in Figure 7-1 and Figure 7-2.

¹⁴ With the probable outcome that we were confident in neither the size nor direction of any GST impact.

¹⁵ We chose equivalised income over other ABS income measures because equivalised income is adjusted for differences in household composition between States and it therefore is likely to provide a more robust and comparable measure of revenue capacity.

Figure 7-1 Relationship between GSP and user charges in the Other revenue category

Source: User charges from ABS GFS data. GSP from ABS catalog 5220.0.

Figure 7-2 Relationship between equivalised household income and user charges

Source: User charges from ABS GFS data. Equivalised household income from ABS catalog 6523.0.

- 27 A relationship is apparent for both GSP and equivalised income. The relationship is stronger for GSP in the two most recent years as shown, but it is considerably weaker in earlier years. The stronger correlation in recent years is due to a sharp decline in per capita collections in South Australia in both years shown and a decline in the ACT in 2011-12. If a linear relationship is assumed, the R^2 is typically about 0.25 for GSP prior to 2010-11 with an R^2 of 0.56 for the 2 years shown in Figure 7-1. The R^2 for equivalised household income is 0.35 for the 2 years in Figure 7-2.
- 28 An assessment using either indicator would exceed our proposed disability threshold of \$30 per capita for Western Australia, Tasmania, the ACT and Northern Territory. Both indicators suggest Western Australia, the ACT and the Northern Territory have above average capacity, New South Wales has close to average capacity and the other States have below average capacity.
- 29 Either indicator would produce a material GST redistribution. However, we have a number of concerns with them:
- The relationship between GSP/equivalised income and user charges is not strong. While we would have some confidence in the direction of the impacts, we would not have confidence in the size of the GST impacts. If the commission

were to adopt similar assessment guidelines to those in the 2010 Review, we would propose the large discount (50%) be applied. A heavily discounted GSP assessment would be material for Western Australia and marginal for the ACT and Tasmania. A heavily discounted equivalised income assessment would be material for the ACT and marginal for Western Australia and Tasmania.

- There are problems with GSP as a measure. Data for the 3 less populous States have high standard errors. The data includes government contributions to GSP. This may overstate the capacity particularly of the ACT where Commonwealth government activity represents a large proportion of the economy because user charges that normally apply to businesses may not be chargeable to the Commonwealth. GSP also includes offshore oil and gas activities which particularly affects Western Australia. The ability of the State to extract revenue from this sector is limited and a GSP measure may over-state Western Australia's user charge capacity.
- There are problems with equivalised income as a measure for the Northern Territory. The data are based on a survey which does not cover remote areas, omitting many Indigenous communities with low incomes. This suggests the income measure for the Northern Territory is over-stated. By how much is unknown.

- 30 Overall, we have considerable concerns about the reliability of an assessment of user charges based on either GSP or household income. We are not confident that an assessment would deliver a better equalisation outcome.

States views are sought on:

- whether an assessment of user charges in total is conceptually valid and if so, whether there is evidence to support it
- how a reliable and material assessment could be constructed, including the data that would be used to measure revenue capacity.

Other issues considered and settled

- 31 Staff consider the commission should continue to have a residual revenue category and assess its revenues EPC. We have examined each of the revenue sources included in the category and concluded that the following revenues should continue to be assessed EPC:

- Contributions by trading enterprises, interest and dividend income. The assessment of interest and dividend income will need to be considered when settling the equalisation model and scope adopted in the next review. If necessary, their inclusion in the Other revenue category can be revisited once those issues are settled.

- Fines. We have not found a basis to re-open consideration of the assessment of fines revenue, which was assessed EPC in the 2010 Review because the commission had concerns about the effect of policy differences between States on capacity to raise revenue.
- Other miscellaneous revenue including a number of State taxes being abolished. These revenues are not average policy or are too small to be material.

Staff propose to recommend the commission:

- continue the assessment method adopted in the 2010 Review, that is, to have a residual revenue category assessed EPC
- the revenues classified to this category would be revenues for which a reliable or material assessment could not be developed.

CHAPTER 8 – SCHOOLS EDUCATION

2010 REVIEW APPROACH

- 1 The Schools education category includes State expenses on government pre-schools, primary and secondary schools and student transport services. It also includes State and Commonwealth payments to non-government schools.
- 2 The Commonwealth provides funding for government and non-government schools. Currently, the government schools part of the National Schools SPP is allocated according to the number of full-time equivalent government enrolments in each State. This distribution makes no allowance for differences in the per student costs of providing school services. Those cost differences are assessed by the commission and reflected in States' GST distributions. The Commonwealth payments made through States to non-government schools have no impact on the GST distribution.
- 3 The Schools education assessment calculates the per capita amount each State needs to spend to deliver the national average level of services—the assessed expenses for each State. The national average expenses per capita are adjusted for differences between States in:
 - the number of students and the rate at which they participate in education
 - the number of higher cost students (Indigenous students and students from low socio-economic backgrounds)
 - the number of lower cost students (non-government school students)
 - the number of students in schools in dispersed rural and remote areas
 - regional and interstate differences in costs per unit of service and administrative overheads
 - school transport requirements.

ISSUES AND ANALYSIS

- 4 Independent of the National Education Reform Agreement (NERA), staff have identified 2 major issues for the assessment:
 - using actual enrolments
 - using Australian Curriculum and Reporting Authority (ACARA) My School data.

Actual enrolments

- 5 The number of students is the primary determinant of school education costs. In the 2010 Review, the commission concluded the number of enrolments for the

compulsory schooling years reflected relative State needs for schools education. However, for the pre-compulsory and post-compulsory years, the commission considered that enrolments could vary between States because of differences in State policies. Therefore, the commission recognised the influence State policies can have on the number of enrolments aged 5 or below and aged 15 and over.

- 6 Staff consider a number of recent developments support using actual enrolments for all school age groups as its broad measure of use. They include:
 - the gradual standardisation of school starting and finishing ages
 - the introduction of the National Curriculum
 - the increase in the materiality threshold.
- 7 Most States now have a similar starting age for pre-school, a compulsory school age of 6 to 15 years and a requirement that after Year 10, a student must be enrolled in school, in training or in employment until age 17. This increasing standardisation flows from States adopting a national approach and can be expected to reduce the influence of State policies.
- 8 All States have agreed to implement a National Curriculum.¹⁶ The Australian Curriculum and Reporting Authority (ACARA) is responsible for its development and the design will encompass four age bands from ages 5 to 18:
 - the curriculum is organised by years of schooling and takes changing developmental characteristics across kindergarten to Year 12 into account
 - kindergarten will be taken as the first year of schooling
 - Year 7 can be taught in primary or secondary school.
- 9 All States have now signed up to the Early Childhood Education National Partnership agreement. In due course, this may lead to more consistent starting ages for school education across States.¹⁷
- 10 All States have increased the school leaving age to 17 years as a result of the formalisation of the National Partnership on Youth Attainment and Transitions in 2009 (the so-called earn or learn provisions). This includes a mandatory requirement for all young people to participate in schooling until they complete Year 10 and participate in full time in education, training or employment, or a combination of these activities up to age of 17.
- 11 Staff consider the standardisation of State policies for school starting and finishing ages and the implementation of a national curriculum tailored by grade, provide

¹⁶ While NERA replaces the National Education Agreement (NEA) for participating States, the national curriculum requirements, policy targets and reform directions are the same under both agreements. The principle difference between the two agreements is that NERA spells out the needs based funding arrangements.

¹⁷ Staff note that Australian government funding for this program will cease at the end of 2014.

support for the view that State policy influences on enrolments are likely to diminish. Staff estimate the effect on the Schools education assessment were the commission to adopt actual enrolments as its measure of use would be material only for South Australia.

Staff propose to recommend the commission:

- use actual enrolments for all school age groups as its broad measure of use in the Schools education assessment.

Student cost weights

- 12 The School education assessment recognises that it costs relatively more to provide school services to certain student groups (Indigenous, low SES, remote students). The assessment gives these high cost students more weight.
- 13 In the 2010 Review these weights were derived from State data. Since then a new national dataset has become available from the ACARA which could be used to derive these weights. The ACARA My School based dataset contains a range of variables:
 - Commonwealth and State recurrent and capital funding (including SPPs)
 - the socio-economic (SES) makeup of the student body
 - the number of enrolments
 - the proportion of Indigenous students
 - the proportion of students from a language background other than English
 - the number of teachers and non-teaching staff
 - the location of the school.
- 14 Staff have examined the My School data and concluded that it provides a means of estimating cost weights for higher cost student groups. The data also provides the opportunity to contribute to the location and service delivery scale assessments. (See the Regional locations and service delivery scale chapters.) The Technical Appendix, located at the end of this chapter, describes how staff have used the ACARA data to derive new cost weights for the Schools education assessment.
- 15 Our work on the My School data has confirmed that the groups we assessed as high cost groups in the 2010 Review are still high cost groups. For example, the My School data suggest:
 - Indigenous students cost about 1.8 times a comparable non-Indigenous student — in the 2010 Review we used a weight of 1.41
 - a low SES student (students in the lowest SEIFA quintile) cost about 1.10 times a comparable high SES student — in the 2010 Review we used a weight of 1.12. While slightly lower than the cost weight used in the 2010 Review, the lower

SES weight would be applied to more students. It would be applied to students in the two lowest SEIFA quintiles.

- 16 The Technical Appendix to Schools education provides the results of our regression model. The model explains 96% of the variation in cost per student across States.

Staff propose to recommend the commission:

- use cost weights derived from My School data if cost weights based on what States do form part of the Schools education assessment.

Non-government school students

- 17 In the 2010 Review, the commission observed the average policy of States was to provide a proportion of the government student cost for each non-government school student. State cost data and ABS enrolment data were used to construct a cost weight for non-government school students.
- 18 Under the National Education Reform Agreement (NERA), the Commonwealth and States will continue to provide funding for non-government schools. The Commonwealth funding contribution for non-government schools will be based on a per student amount, need-based loadings and a capacity to contribute adjustment. States have agreed to allocate their contribution using an agreed needs-based funding model.¹⁸ The Commonwealth Government has said that all loadings will be fully publicly funded including those for non-government schools.¹⁹
- 19 Staff would like input from the States about how a State's total funding for non-government school students will be determined after the introduction of NERA. For example, will States provide a proportion of their average funding of Government students to non-government students and, if so, could this proportion change as funding for Government students grows under NERA. Alternatively, will State's adopt a needs-based funding model for non-government school students?
- 20 Staff do not propose any changes to the treatment of the Commonwealth contribution for non-government schools. This revenue, provided through the States for non-government schools, will not affect the relativities because States are required to pass the revenue on to non-government schools in accordance with the distribution determined by the Commonwealth. We assume this treatment is consistent with the 'no unwinding' clause of the terms of reference, but seek States views on this.

¹⁸ National Education Reform Agreement, provisions 70 to 73, Better Schools website, accessed on 30 August 2013.

¹⁹ Better Schools website, accessed 12 September 2013. <http://www.betterschools.gov.au/new-funding-system>

Staff propose to recommend the commission:

- continue to assess the Commonwealth payments for non-government schools under NERA so they will not affect the relativities.

State views are sought on:

- the average State policy for funding non-government schools after the introduction of NERA
- how this should be reflected in the assessment of State funding for non-government schools
- whether the 'no unwinding' requirement has any implications for how the commission assesses State non-government school expenses.

School transport

- 21 The urban student part of the assessment for the 2010 Review assumed costs were based on the number of urban students travelling to and from school.
- 22 The rural student part of the assessment was based on the number of rural students travelling to and from school and the average distance they travelled to school in each State.

Staff propose to recommend the commission:

- use 2011 Census data to update the data used in the school transport assessment.

PROPOSED CATEGORY STRUCTURE

- 23 Staff propose the following assessment structure for this category in the next review if the commission decides to adopt an assessment based on what States do.

Table 8-1 Proposed Schools education category structure

Component	Disability	Influence measured by disability
Service expenses	SDC	Recognises that Indigeneity, socio-economic status and non-government school students affect the use and cost of school services.
	Service delivery scale	Recognises the cost of providing school education in small population centres.
	Location	Recognises the differences in the cost of providing labour and non-labour resources between States and to different areas within a State.
Student transport expenses	Transport	Recognises the differences between States in the cost of providing transport services to school students.
Other expenses	Administrative scale	Recognises the unavoidable costs each State incurs to provide the policy and administrative infrastructure necessary to provide the minimum unavoidable service, regardless of the size of the task
	Non-government schools component of the National schools SPP	Recognises differences between State in the distribution of the non-government school component of the National schools SPP

SCHOOLS EDUCATION TECHNICAL APPENDIX

Background

- 1 The Australian Curriculum and Reporting Authority (ACARA) is responsible for collecting, collating and publishing detailed data on all government and non-government schools.
- 2 ACARA publishes individual school data on its My School website. The published data include information on:
 - each school's income sources, particularly money provided by the Commonwealth and State governments
 - the socio-demographic profile of the student body
 - the location of the school.
- 3 ACARA has provided the commission with individual school data that allows us to identify the cost drivers for schools.²⁰ The financial data relate to 2010 and the student and staffing data relate to 2011.

HOW HAVE WE USED ACARA DATA?

- 4 Staff have developed a regression analysis using the ACARA dataset. The regression uses a range of variables to explain government funding per school, including:
 - the size of the school
 - the number of Indigenous students
 - the number of low SES students
 - the location of the school, including whether it is located in an area that experiences service delivery scale.
- 5 In the model, a low SES student is a student attending a school located in a postcode attracting a SEIFA score in the bottom two quintiles. Our modelling suggested the additional amount States spent on low SES students in the second lowest SEIFA quintile was similar to the additional amount they spent on low SES students in the lowest quintile and so we grouped the two quintiles and treated those students as low SES students. Students attending a school located in a region attracting a SEIFA score in the top three quintiles are deemed to be high SES students.
- 6 In the model, schools experiencing service delivery scale are deemed to be schools in small isolated communities, communities located more than 20kms from a population of 5 000 or more.

20 Whether or not these cost weights are ultimately used will depend on how the commission responds to paragraph 6 of the review terms of reference.

- 7 These variables are similar to the variables used to determine funding under the National Education Reform Agreement (NERA).²¹ Unlike NERA, our regression model does not include a low English proficiency variable. The only variable available to us was Language Background Other Than English (LBOTE) and that variable, while statistically significant, was not material.

Government schools

- 8 Staff have run a regression on government schools, excluding special schools and schools with incomplete information. Staff intend to use the model results to directly estimate:
- cost weights for use in the Schools assessment, assuming the commission continues to assess school education expenses on the basis of what states do
 - regional costs for use in the Location assessment
 - the cost of schools in small isolated communities for use in the Service delivery scale assessment.
- 9 We believe the ACARA data used in the model are robust and no discounting would be required on data reliability grounds.

Non-government schools

- 10 In the 2010 Review, the commission determined that average State policy was to fund non-government students as a proportion of the average government student cost. The implication was that the student profile of the non-government sector did not influence the level of funding provided to it. Consequently, the commission used the government school cost weights and the proportion of Indigenous and low SES students in government schools to determine assessed expenses for non-government schools.
- 11 Whether the commission uses the results of a non-government regression in the 2015 Review will depend on whether it determines the average State policy is to finance non-government students on the basis of:
- a proportion of the average government student cost — in which case it might not use the non-government regression
 - the student profile of non-government schools — in which case it might use the non-government regression.

21 Schedule B of the NERA recommends a schooling resource standard with loadings for low socio-economic status, students from Aboriginal and Torres Strait Islander (ATSI) backgrounds, school size and location as well as interim loadings for low English language proficiency and students with a disability.

- 12 Staff have not yet determined average policy in this area and so have yet to recommend how a non-government assessment should be made in the 2015 Review. State views are being sought.

THE GOVERNMENT SCHOOL REGRESSION

- 13 The results of the government school regression analysis are shown in Table 8-2. The variables used in the model are listed as is the additional cost relative to the standard student. The standard student is a non-Indigenous New South Wales student from the top 3 SEIFA quintiles and in an area that is classified as a major city of Australia (not a service delivery scale area).
- 14 The model shows that, in addition to the standard cost of \$9 213 per student, there are loadings due to the socio-demographic profile of students and the location and size of the school:
- Indigenous students cost an additional \$7 629
 - low SES students cost an additional \$1 020
 - remoteness adds a cost of between \$2 026 and \$3 510
 - those experiencing service delivery scale cost an additional \$1 020.
- 15 The model's R-squared is 0.96, implying the model explains 96% of the variation in the cost per school across States. The remaining amount may be due to variables not included in our model (such as students with disabilities, students with low English proficiency). The model provides robust information which the commission can use to derive cost weights for the School education assessment.
- 16 We included State dummies in the model as the regression model predicts total funding per school. The dummies are the number of students in a school, times 1 if the school is in that State, or zero if not in that State. The dummies are used to capture policy differences or differences in the data collected by States and provided to ACARA. They show very large differences between the States, ranging from -\$608 in Queensland to \$3 111 in the Northern Territory.

Table 8-2 Regression model cost estimates for government schools ^(a)

Variable	Variable estimate	Implied cost loading (a)
	\$ per student	%
Cost of a standard student (b)	9 213	-
Impact of student demographics		
Additional cost of an Indigenous student (c)	7 629	76.0
Additional cost of a low SES student (d)	1 020	10.1
Impact of State		
Additional cost for schools in:		
Victoria	-343	-
Queensland	-608	-
Western Australia	1539	-
South Australia	705	-
Tasmania	498	-
ACT	2 425	-
Northern Territory	3 111	-
Impact of location:		
Additional cost for schools in:		
Inner regional areas	495	4.8
Outer Regional areas	372	3.6
Remote area	2 026	19.7
Very remote	3 510	34.1
Impact of school size		
Additional cost for schools experiencing service delivery scale (e)	1 020	9.8
(a)	All variables that produce cost weights are significant at 95% confidence level and almost all at 99%	
(b)	The standard student is a non-Indigenous New South Wales student from the top 3 SEIFA quintiles and in an area that is classified as a major city of Australia (not an SDS area).	
(c)	The Indigenous loading was calculated as: $Loading = 1 + \frac{Additional\ spending\ per\ Indigenous\ student}{Non-Indigenous\ spending\ per\ student}$. The loadings for the other student groups were calculated in a similar way.	
(d)	Students attending a school in an area that has a SEIFA score in the bottom two quintiles are considered to be low SES. Students attending a school in an area that has a SEIFA score in the top three quintiles are considered to be high SES.	
(e)	These are schools in small isolated communities, communities located more than 20kms from a population of 5 000 or more.	

Source: Regression undertaken by commission staff using confidential ACARA data.

The Indigenous cost weight

- 17 Our regression result shows States spend an additional \$7 629 on each Indigenous student. This implies a cost weight of 1.76 for Indigenous students, which is larger than the weight of 1.41 we used in the 2010 Review.²²
- 18 The data provided by States in the 2010 Review suggested they spent \$487.7 million on programs targeted at Indigenous students. The commission had concerns about the variability and, therefore, the comparability of the State provided data. It adopted a conservative approach in setting a weight of 1.41.
- 19 The additional cost of \$7 629 per Indigenous student implies States spend an additional \$1 058 million on Indigenous students. Table 8-3 shows the implied spending by State.

Table 8-3 Impact of the Indigenous cost weight, ACARA data, 2010

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total/Avg
Indigenous students (No.)	44 726	8 619	38 959	19 850	8 108	4 395	911	13 140	138 708
Assessed additional cost (\$m)	341	66	297	151	62	34	7	100	1 058
Assessed additional cost (\$pc)	47.6	12.0	67.0	65.3	37.9	65.8	19.1	434.8	47.8

Note The additional costs are obtained by applying the additional Indigenous student cost (\$7 629) to the number of Indigenous students in each State.

Source: ABS Schools Australia, cat no 4221.0. Government school regression.

- 20 Queensland (8%), Western Australia (8%), Tasmania (8%) and the Northern Territory (46%) have the highest proportion of Indigenous students in government schools and so would be assessed as needing to spend more per capita to provide Indigenous school services than other States. Victoria has the lowest proportion of Indigenous students (2%) in government schools and so would be assessed as needing to spend the least per capita to provide Indigenous school services.

Low SES cost weight

- 21 The Gonski report states '36% of all government school students were from the lowest quarter of socio-educational advantage'.²³ It costs more to provide school services to students from a low SES background and the cost increases as the proportion of low SES students in a school increases.

²² The cost weight was calculated as: $Cost\ weight = 1 + \frac{Additional\ spending\ per\ Indigenous\ student}{Non-Indigenous\ spending\ per\ student}$

²³ The Review of Funding for Schooling Final report, December 2011, p9

- 22 The data provided by States in the 2010 Review, suggested they spent \$569.2 million on programs targeted at low SES students. The commission used that data to derive a cost weight of 1.12. In that review, the commission defined a low SES student as a student attending a school in a Census Collection district with a socio-economic index for areas (SEIFA score) in the lowest quintile.
- 23 The regression model shows that it is national average policy to spend \$1 020 more on each low SES student. This implies a cost weight of 1.10.²⁴ While slightly lower than the cost weight used in the 2010 review, this low SES weight would be applied to more students (students in the two lowest SEIFA quintiles). The additional cost of \$1 020 per low SES student, implies States spend an additional \$819 million on low SES students. Table 8-4 shows the implied spending by State.

Table 8-4 Impact of the low SES cost weight, ACARA data, 2010

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total/ Avg
Low SES students (No.)	327 377	149 321	168 320	45 465	71 738	29 297	0.0	10 740	802 257
Assessed additional cost (\$m)	334.1	152.4	171.8	46.4	73.2	29.9	0.0	11.0	818.6
Assessed additional cost (\$pc)	46.6	27.7	38.7	20.0	44.9	58.7	0.0	47.5	37.0

Note The additional costs are obtained by applying the additional low SES student cost (\$1 020) to the number of low SES students in each State.

Source: Government school regression.

- 24 New South Wales (44%), South Australia (46%) and Tasmania (55%) have the highest proportion of low SES students in government schools and so would be assessed as needing to spend more per capita to provide low SES school services than other States. Aside from the ACT (0%), Victoria (29%) and Western Australia (19%) have the lowest proportion of low SES students in government schools and so would be assessed as needing to spend the least per capita to provide school services to low SES students.

Service delivery scale

- 25 States face different service delivery costs in certain parts of the State where the small size and dispersed nature of many communities leads to above average staffing levels. In the 2010 Review the commission made a separate service delivery scale assessment on the basis of staffing and cost data supplied by the States.

²⁴ The cost weight was calculated as: $Cost\ weight = 1 + \frac{Additional\ spending\ per\ low\ SES\ student}{Non-low\ SES\ spending\ per\ student}$.

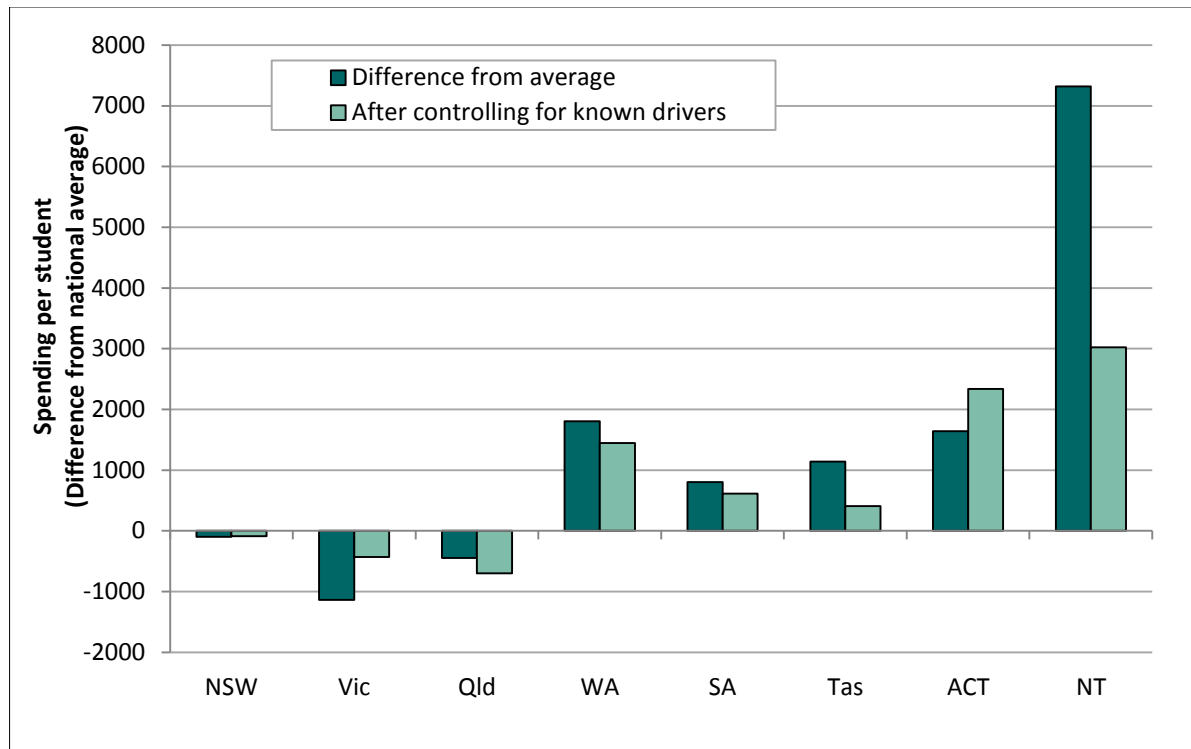
- 26 Our regression model shows that schools located in small isolated communities have an additional cost of \$1 020 per student. This information has been used to develop the service delivery scale assessment for the 2015 Review.

Regional location costs

- 27 In the 2010 Review the commission used State provided data on total cost and number of employees per school by region. These data showed the average costs per employee increased with remoteness. The commission used this information to construct a regional cost gradient for schools.
- 28 Our regression model shows remoteness adds a cost of between \$2 026 and \$3 510. This information has been used to develop the regional location assessment for the 2015 Review.

Differences in State spending

- 29 Figure 8-1 shows differences in State spending per student using the ACARA data and differences in State spending per student implied by our regression model. The ACARA data suggests Western Australia, South Australia, Tasmania, the ACT and the Northern Territory spend more per student than the average.
- 30 For Western Australia and the Northern Territory, this partially reflects their high proportions of Indigenous students and students living in remote areas. The data suggest Western Australia spends \$1 800 more per student, but this falls to \$1 450 when we use our regression model to control for differences in student attributes. The data suggest the Northern Territory spends \$7 320 more per student. More than half of this above average expenditure is due to the attributes of the Northern Territory's student population, in particular its large Indigenous and remote student populations. After allowing for these attributes, the Northern Territory still spends \$3 021 more per student than an average State. These results could mean some States have chosen to provide a higher (or lower) level of service, the data they provide to ACARA are not comparable to other States or our model does not capture all non-policy differences between the States.

Figure 8-1 State differences in government school funding per student

Source: Cross classified and regression of ACARA data.

- 31 The ACARA data suggest Victoria and Queensland spend less per student than the average. This could reflect their low proportions of Indigenous students and students living in remote areas. The data suggest Victoria spends \$1 100 less per student, but this falls to \$430 less per student when we control for differences in student attributes. The data suggests Queensland spends \$450 less per student, which rises to \$700 less per student when we control for differences in student attributes. Again, these differences could mean these States have chosen to provide a lower level of service or the data they provide to ACARA are not comparable to other States.
- 32 The actuals and the assessed numbers are in the same direction, which may indicate policy (or accounting) differences are larger than the non-policy differences.

CHAPTER 9 – PRIORITY ISSUE

NATIONAL EDUCATION REFORM AGREEMENT (NERA)

1 Clause 6 of the terms of reference states:

The Commission will ensure that the GST distribution process will not have the effect of unwinding the recognition of educational disadvantage embedded in the National Education Reform Agreement (NERA) funding arrangements. The Commission will also ensure that no State or Territory receives a wind fall gain through the GST distribution from non-participation in NERA funding arrangements.²⁵

2 In this chapter, staff propose how the terms of reference might be interpreted, and how NERA funding may be treated in the schools assessment. However, States should note that these staff views are preliminary and subject to change, pending the actual implementation arrangements undertaken by the Australian Government in conjunction with States.

3 By the time the 2015 Review is completed, on current implementation timetables, NERA funding arrangements will have commenced and been in place for 12 months. We expect the commission's recommendations for 2015-16 will need to reflect these arrangements. NERA appears to be a major reform of Commonwealth-State financial relations, so backcasting may be appropriate if reliable data to backcast are available. If backcasting should occur, how it might be implemented is an issue for consultation with States towards the end of 2014.

BACKGROUND

4 Following the final report from the Review of Funding for Schooling (the Gonski Review), the Australian Government announced its intention to implement a national Schooling Resource Standard (SRS) as the way of funding school education services.

5 The SRS model provides funding on the following basis:

- a base amount per student
- extra loadings for disadvantage such as disability, low socio-economic background, school size, remoteness, the number of Indigenous students, and lack of English proficiency.

6 The new funding arrangements are detailed in the NERA and related bilateral agreements.

²⁵ This clause is consistent with clauses 76 and 77 of the NERA.

- 7 Under the agreements signed by the participating States, government school funding is expected to reach SRS funding levels by the end of 2019. The Commonwealth will fund a fixed proportion of a school's base amount plus loadings.²⁶ The proportion reflects the total level of Commonwealth funding for schools prior to the introduction of NERA (that is 2011 for States that have signed the NERA). The total level of Commonwealth funding prior to the introduction of NERA includes the National Schools SPP and NPPs that support State education services. The proportion of total State school education expenses funded by the Commonwealth in 2011 was different for each State and consequently, the new funding arrangements entrench the differences in funding between States for future years.
- 8 From 1 January 2014, States are required to implement needs-based funding models that align with the Commonwealth's SRS funding model.²⁷ State-based models will include a base per student amount and loadings for the similar types of schools and students recognised in the Commonwealth's model with differences across States reflecting specific additional arrangements. The State-based resource models will be used to distribute all government funding—Commonwealth and State—to schools. These arrangements are intended to provide States with the flexibility to make funding decisions that suit their local context while ensuring the necessary assistance is delivered. Under the agreement, States are required to publish how they have calculated their funding allocations, and what each school actually receives each year.
- 9 Table 9-1 details the NERA loadings or cost weights and those used by the commission. The NERA loadings are more detailed than those used by the commission and the commission's assessment includes a number of extra disabilities or allowances including interstate wage, administrative scale and student transport.
- 10 Implementing the new funding arrangements will involve substantial additional spending for the Commonwealth and State governments, with a resulting increase in the Schools education average expense. The bilateral agreements between the Commonwealth and participating States specify that the Commonwealth will provide 65% of the additional funding required to bring schools up to the new SRS. The new funding arrangements will be phased in over 6 years commencing in January 2014. At present, New South Wales, Victoria, Tasmania, the ACT and South Australia have signed the NERA and related bilateral agreements.
- 11 The new funding arrangements will involve changes to how the Commonwealth allocates school funding to the States. Currently, the government schools component of the National Schools SPP makes no allowance for differences in the per student costs of providing school services. Those cost differences are assessed by the commission and reflected in States' GST distributions. Currently, the non-government

²⁶ Australian Education Bill 2013, Section 32.

²⁷ National Education Reform Agreement (NERA), Part 5, paragraphs 57-62

schools component of the National Schools SPP does not impact relativities and so does not affect States' GST distributions. In addition to the National Schools SPP, the Commonwealth has been providing funding to government and non-government schools through a number of NPPs which target specific outcomes. Under NERA, all Commonwealth government funding for government and non-government schools will be provided through NER funding. Non-participating States will receive funding consistent with the National Schools SPP, as well as payments under the Rewards for Great Teachers and Low Socio-economic Status School Communities NPPs until those agreements expire.²⁸

- 12 The new federal government's schools policy says it will maintain the Commonwealth funding included across the forward estimates, but change the Australian Education Act to dismantle the 'command and control' features. It is not clear as yet what this means for NERA, or the implications for what States do.

²⁸ Budget Paper No. 3, 2013-14, pages 51 and 54. These NPPs are expected to expire in 2012-13 and 2013-14 respectively.

Table 9-1 Cost loadings under NERA and commission's proposed assessment ^(a)

Reason for loading	NERA loadings	Commission loadings
Students from low SES backgrounds (b)	<p>For students in lowest ICSEA quarter: Loading ranges from 15% to 50%, the latter applying for schools with 75% cent or more students in the lowest ICSEA quarter</p> <p>For students in second lowest ICSEA quarter: Loading ranges from 7.5% to 37.5%, the latter applying to schools where 75% or more of students in second lowest ICSEA quarter</p>	For students in lowest two SEIFA quintiles: Loading of 1.10 (c)
Indigenous students	Loading of 20% for the first Indigenous student up to 120% if 100% of students are Indigenous.	Loading of 1.76 for all Indigenous students (c)
Students with low English proficiency	Interim loading for students with low English proficiency of 10% for each student with a language background other than English up to a capped funding amount	In the 2010 Review an aggregate allowance was made for CALD in the Other Expenses category because it was not material in any one category including Schools education.
Students with disabilities	An interim loading in 2014 of 186% of the per student amount for each student with disability. A new nationally consistent student with disability loading will be available from 2015.	Currently no loading applies due to lack of reliable data.
School size	Loadings of up to \$150 000 for primary schools and \$240 000 for secondary schools, based on enrolments.	Service delivery scale loading of 1.10 per student for schools in small isolated communities located more than 20 kms from a population of 5,000 or more people
Location	Cost loading of up to 80% for schools with an ARIA score of 15 (very remote). This amount is applied to the per student amount and size loading.	Cost loadings per student (based on ARIA): (c) 1.05 for inner regional schools 1.04 for outer regional schools 1.20 for remote schools 1.34 for very remote schools
School transport	Not assessed	Differences between States in the cost of providing school transport
Administrative Scale	Not assessed	Allowance for minimum administrative infrastructure needed for minimum level of service
Regional costs	Not assessed	Differences in the cost of labour and non-labour resources between and within States

(a) Proposed loadings or cost weights based on staff analysis of ACARA data for 2011

(b) The Index of Socio-educational Advantage (ICSEA) is ACARA's measure of SES using family background information provided directly to schools by families and, where not available, Census data.

(c) These loadings are additional to the cost of a standard student.

STATE VIEWS

- 13 Most States acknowledge there is considerable uncertainty about the NERA funding arrangements. The following summarises the current position of States on the two aspects of clause 6 of the terms of reference.

No unwinding of NERA educational disadvantage

- 14 New South Wales said the NERA loadings need to be excluded from the horizontal fiscal equalisation (HFE) process because it will be difficult to ensure the recognition of educational disadvantage is not unwound. If the Commonwealth SRS loadings meet the equalisation needs of the States, the base funding does not need to be equalised or there is a risk of double counting needs. New South Wales said the simplest solution might be an equal per capita (EPC) assessment of all school expenses and Commonwealth funding or the exclusion of all funding and expenditures related to schools education from the HFE process.
- 15 Victoria, South Australia, Tasmania, the ACT and the Northern Territory said the NERA loadings could be used instead of the commission's own assessment of disabilities. The ACT and the Northern Territory said the terms of reference require the commission's disability assessment to 'align exactly with' or 'mirror' the loadings for educational disadvantage. A number of States said the commission's assessment recognises a number of disabilities not recognised by the NERA loadings (such as interstate wages, administrative scale and student transport) and these disabilities should continue to be recognised. This would be more consistent with achieving equalisation. South Australia and the ACT said the Commonwealth National Education Reform (NER) payment should be included in the commission's Commonwealth payments revenue assessment so that it impacts the relativities.
- 16 A few States observed there is no requirement for States to fund schools on the same basis as the SRS and therefore, using the NERA loadings would be inconsistent with the commission's 'what States do' principle. Tasmania noted the terms of reference undermine the principle of HFE by limiting the commission's ability to achieve equalisation.
- 17 Queensland said the HFE principle should be the key to any implementation of national reforms like NERA. It says the NERA base funding and the National Schools SPP serve the same purpose and should be treated consistently in the commission's assessment.
- 18 Western Australia said the commission should make its own assessment of disabilities including both the influences covered by the SRS loadings and other influences (such as interstate wage differentials). To satisfy the 'no unwinding clause' a State would receive an adjustment to its GST grant if:

- it could be demonstrated that the commission's own assessment of disabilities that relate to NERA disadvantage loadings results in an adverse redistribution of the Commonwealth NERA funding
 - the State is in practice reflecting the NERA loadings in its distribution of Commonwealth funding provided under NERA.
- 19 Tasmania and the Northern Territory put forward more than one option for assessing schools education under NERA.
- Tasmania outlined 2 alternatives apart from using the NERA loadings to assess needs.
 - Exclude the Commonwealth NER funding component based on SRS loadings but equalise the base funding. However, Tasmania said neither NERA nor HFE would be achieved through this approach.
 - Adopt a subtraction approach in which the commission would assess school education spending and then deduct amounts funded from non-State sources to determine the residual GST requirement. However, Tasmania said, while strictly speaking this might not unwind the NERA Commonwealth payments, overall funding allocations would be determined based on the commission's assessment of need rather than a NERA based disadvantage model. This may be seen as 'overriding' the NERA model. This was Tasmania's preferred approach.
 - The Northern Territory outlined 1 alternative.
 - The commission could assess school education expenses in 4 components: Commonwealth revenue; service expenses; transport expenses; and other expenses. The Commonwealth component would be assessed based on the SRS loadings. The commission's assessment of service expenses would need to expand to recognise all the disabilities recognised under NERA.
- 20 Tasmania made a number of observations about the arrangements.
- The starting baseline and additional funding amounts are policy contaminated because they reflect differential State funding levels in 2011. These are embedded in future funding arrangements. NERA funding is also policy contaminated because it is based on actual school locations, size, structure and participation rates.
 - Each State has negotiated a State-specific transition pathway that determines the total funding envelope in any given year during transition (and in all likelihood beyond). For example, in Tasmania's case 95% of the projected SRS aggregate funding quantum will be reached in 2019, and the arrangements beyond that date remain unspecified.
 - The SRS is a funding model not a resource allocation model. States retain discretion to fund individual government schools using their own resource

allocation models, subject to meeting maintenance of effort and minimum indexation targets.

- While there is clarity about what constitutes ‘base’ and ‘disadvantage’ funding, distinguishing the two components may be problematic and potentially open to dispute.
- The SRS funding model also includes non-government schools which will ultimately lead to a significant increase in state government funding for non-government schools. This will require the commission to consider its overall treatment of education funding and expenditure, particularly for non-government schools.
- The commission uses a national average standard while the NERA standard is a minimum one.

- 21 Tasmania said the Commonwealth Treasury has indicated in recent Heads of Treasuries (HoTs) forums in reference to the first clause of the terms of reference:

it would not be desirable for the CGC to override [the NERA] disadvantage assessments with a different balance of disadvantage factors in its assessments.... However, consistent with the recent HoTs Deputies discussion, the treatment of base funding should be considered as part of the upcoming Methodology Review.²⁹

No windfall gain requirement

- 22 New South Wales said it will be important that no participating State has their GST share reduced by their participation in NERA. Victoria agrees this appears to be the intention of the no windfall gain clause. New South Wales said the clause is also intended to ensure that non-participating States should not have their GST share increased.
- 23 The Northern Territory considers the intention of the ‘no windfall gains’ clause is to ensure non-participating States are not advantaged through the GST distribution process, but it is also important that no State is penalised for not participating. Penalising States for non-participation would be contrary to the policy neutrality principle and the requirement that the GST be distributed on an untied basis.
- 24 Victoria agreed non-participating States should not be penalised for their policy choice.
- 25 Queensland commented that the HFE system should not be used to enforce specific Commonwealth policies.
- 26 Western Australia has interpreted no windfall gain to mean that the GST process should not compensate non-participating States for the difference between the

²⁹ *Commonwealth Treasury paper – National Education Reform Funding – HFE Treatment* in Tasmanian Government submission to CGC 2015 Methodology Review.

national average funding under NERA and the national average funding under the existing funding arrangements. That means if NERA is average policy, then it should make its assessments as if all States are on NERA. The ACT said this may not ensure non-participating States received no windfall gain. An alternative approach is to carry out separate assessments for participating and non-participating States. This would involve applying a lower (non-NERA) dollar standard of expenditure and revenue to non-participating States.

- 27 South Australia said any benefit to non-participating States should be annulled.
- 28 Tasmania said the Commonwealth Treasury interpretation of the second part of clause 6 means:
 - any additional funding flowing to a participating State will not – as a consequence of the HFE process – be equalised towards a non-participating state.³⁰
- 29 Tasmania said it is too soon to specify how this would be achieved, but it assumes the commission will take an approach to non-participating states similar to that outlined for the National Disability Insurance Scheme.
- 30 The Northern Territory said the treatment of NERA payments should not be applied to any future NPPs for schools education.

INTERPRETING THE TERMS OF REFERENCE

- 31 The terms of reference direct the commission not to unwind the recognition of educational disadvantage embedded in the NERA funding arrangements. They do not direct the commission to treat the Commonwealth NERA funding as having no direct influence on the relativities. Nor do they direct the commission to exclude an assessment of Schools education expenses from the calculation of relativities.
- 32 The Commonwealth funding for NERA includes a base amount per student plus cost loadings (or SRS loadings) to recognise educational disadvantage, and under the agreement, States will also provide needs-based funding that includes a base amount per student and loadings.
- 33 In interpreting the no unwinding clause the commission must decide what the no unwinding clause applies to. Based on what we know to date, staff consider that the recognition of educational disadvantage relates to the SRS loadings, not to base funding. We also consider that ‘not unwinding’ relates to the fiscal impact of SRS loadings in Commonwealth payments for government schools — not the loadings used by States in their own allocation models.

³⁰ Tasmanian Government Submission to the CGC 2015 Methodology Review, page 16.

- 34 We recognise that this is a key issue in designing an assessment consistent with the terms of reference and seek views on whether we have interpreted the terms of reference appropriately.
- 35 At an operational level the commission must also decide to what extent it should interpret the no unwinding clause. Staff propose that if there is no material unwinding that would be consistent with the terms of reference.

ASSESSING SCHOOLS EDUCATION UNDER NERA

- 36 Staff have identified three options for assessing schools education under NERA that are consistent with different interpretations of the no unwinding clause. We seek views on which option most appropriately achieves HFE and satisfies the no unwinding clause.

Exclusion model

- 37 Under this approach the commission would exclude that part of the Commonwealth NERA payment relating to the SRS loadings and the expenditure it finances, before applying the commission's assessments to the States' own education expenses and Commonwealth base funding. Practically, this approach may be difficult to implement because it would require State data to identify national spending on disabilities over and above that funded directly by the Commonwealth each year. It may also be impractical if the Commonwealth funding contribution cannot be easily split into SRS loadings and base funding.
- 38 New South Wales suggested a variation that would exclude the entire Commonwealth NERA payment and all State expenditure related to schools education from the equalisation process, on the grounds that the Commonwealth SRS loadings provide the States with the additional fiscal resources to provide education at the same standard. Staff agree that if the Commonwealth NERA payment met 100% of the total SRS loadings then most of the role played by HFE would be met by the loadings embedded in the Commonwealth payment. As it stands, the Commonwealth will only fund a proportion of each State's SRS loading (roughly one third — but the proportion is different for each State).

Equalisation model based on what States do

- 39 Under this approach the commission would assess schools education expenses in the normal way based on what States do. It assumes that State expenditures follow the NERA funding weights.
- 40 However, taking a broad view of what states do, and using historical average cost weights, the commission's assessment of need would almost certainly entail some

unwinding. The commission could reduce the degree of unwinding by using annually updated cost weights, adopting a more detailed view of what States do and ignoring materiality thresholds.

- 41 It is unlikely that the commission's cost weights, based on observations of what States do, would align exactly with the weightings used to calculate SRS loadings because:
- States (who will continue to fund about 70% of school education expenses) are only required to ensure their resource allocation models are aligned with the SRS funding model.³¹ As a result, what the commission observes as the average funding policy of States could differ from the actual SRS funding model.³²
 - If, on average, States spend more to address educational disadvantage than the amount specified by the SRS loading, the commission's assessment of need would exceed the recognition of educational disadvantage embedded in the NERA funding arrangements. Under these circumstances there would be no unwinding.³³
- 42 This approach would be closer to what States do, but staff could not be sure that State spending decisions would be so close to the NERA weights that unwinding would be immaterial.

NERA model based on the SRS standard

- 43 Under this approach the commission would use the SRS loadings to assess disabilities. In practical terms, it is not possible for the commission to apply the SRS loadings in its assessment (due to their complexity). However an approach equivalent to applying the SRS loadings is to determine each State's assessed school education expenses using their share of the total State SRS requirement. This would amount to using the SRS standard for the assessment of State school education expenses. The simplest way to implement this approach would be for the Commonwealth to provide the commission with the total SRS requirement (or State shares of the total requirement) calculated on a consistent basis for each State.
- 44 Under this approach, while the Commonwealth NERA payment would be taken into account in the determination of GST shares, there would be no unwinding because the SRS loadings would be fully reflected in the expense assessment.

³¹ National Education Reform Agreement, Part 5 — Funding Reform Arrangements.

³² Provision 58 of NERA states: 'funding arrangements will take account of efficiencies that can be realised while achieving improved student outcomes'. This recognises that if a State is able to achieve the agreed outcomes at a lower cost this will be taken into account when evaluating a State's progress against the agreed objectives and outcomes.

³³ At least one State has suggested the SRS sets a minimum funding standard which would imply this outcome may be possible.

- 45 A variation on this model would be to augment it by adding extra disabilities not recognised in the SRS funding model such as administrative scale, interstate location costs and student transport.
- 46 This approach would ensure that there was no unwinding, but might not reflect what States do. It would still result in State schooling expenses being equalised. This approach would require data that could only come from the Commonwealth.

State views are sought on:

- whether the staff interpretation of the ‘no unwinding’ clause, including the extent to which the commission should interpret this clause, is consistent with the intention of the terms of reference
- which of the 3 options for implementing the ‘no unwinding’ clause most appropriately achieves HFE and satisfies the requirement of the terms of reference.

Treatment of non-participating States

- 47 The terms of reference also direct the Commission to ensure that no State or Territory receives a windfall gain through the GST distribution from non-participation in NERA funding arrangements. Windfall gains could arise from:
- the treatment of Commonwealth NERA payments in the Commonwealth payments revenue assessment
 - an increase in the total level of State schools education spending.
- 48 Staff consider the main potential for windfall gains for non-participating States is through the commission’s assessment of Commonwealth NERA funding . If the commission were to do nothing, and Commonwealth funding is lower for non-participating States than participating States, then non-participating States would receive an increased GST payment.
- 49 Staff consider there are two options for ensuring non-participating States do not receive a windfall gain. These are by:
- imputing an additional amount of Commonwealth funding for non-participating States
 - allocating actual payments made on the basis of State shares of the total NERA funding entitlement.
- 50 Under the first option, the imputed amount would be based on the difference between a State’s Commonwealth payment under the old National Schools SPP and the amount it would have received under NERA. This was the approach adopted by the commission in the 2011 Update to ensure Western Australia did not benefit from not participating in the national health reforms which commenced in 2009-10.

- 51 Staff are yet to reach a decision on whether a matching amount would need to be included on the expenditure side as this could lead to a windfall gain for States with above average expense needs. Given the significant increase that is expected in the total level of State spending on schools education under NERA, the expenditure impacts could be material.
- 52 Under the second option, State shares of what they would have received under NERA (their NERA entitlement) are applied to the actual NERA payments made to participating States. This approach is consistent with the assessment of revenue capacity where not all States levy a particular tax, for example in the case of land tax, which is not levied by the Northern Territory. An additional benefit of this option is that we would not have to address the issue of increasing expenses. For these reasons, staff propose that the second option be the preferred approach.
- 53 Some non-participating States say the commission should not penalise them for their policy choice and including an additional amount of Commonwealth funding for non-participating States may be viewed as a penalty. However, staff consider the direction in the terms of reference is clear and including an additional amount for non-participating States as described above would be the simplest way to satisfy the requirements of the no windfall gain clause.

CHAPTER 10 – POST-SECONDARY EDUCATION

2010 REVIEW APPROACH

- 1 The Post-secondary education category covers State expenses on vocational education and training (VET) provided by public and private training providers and higher education.
- 2 The assessment calculates the amount each State needs to spend to deliver the average level of post-secondary services. For each State, the national per capita average expense on post-secondary services is adjusted for differences between the average and its proportion of people of working age (15 to 64 years) and the intensity with which this group uses post-secondary services including its proportion of high cost students (such as Indigenous students, students in remote areas and students with low English fluency). The assessment also recognises the cost to the ACT of providing post-secondary services to New South Wales residents.

ISSUES AND ANALYSIS

- 3 No State identified issues with this assessment. However, commission staff have identified the following issues:
 - VET expenses in the Services to industry category should be moved to this category
 - the increasing role of private registered training organisations (RTOs)
 - cost weights from the 2010 Review should be updated.

Moving VET expenses from the Services to industry category to this category

- 4 The Services to industry category includes State spending on VET programs provided by organisations other than those provided in technical and further education (TAFE) institutions. A decision was made in the 2010 Review not to allocate non-TAFE VET expenses to the Post-secondary education category due to concerns around the reliability of 4-digit government purpose classification (GPC) data, to which these expenses were classified. In any case, at that time, the level of spending on non-TAFE vocational training was smaller than it is now.
- 5 Since the 2010 Review, VET expenses in the Services to industry category have grown by about 65% due to the increased role of private registered training organisations (RTOs).³⁴ Government funded vocational training provided by private RTOs is included

³⁴ Private RTOs were providing 25% of vocational training hours in 2011, compared with 12% in 2008.

in the National Centre for Vocational Education and Training (NCVER) contact hours data used to assess service use in this category. Staff consider it more appropriate to move State spending on VET provided by private RTOs to Post-secondary education where needs related to these expenses are being recognised. In 2011-12, this will increase Post-secondary education expenses by \$983 million or 16%.

Staff propose to recommend the commission:

- move all VET expenses in the Services to industry category to the Post-secondary education category.

Increasing role of RTOs

- 6 Private RTOs are playing an increasingly important role in the delivery of VET services, as shown in Table 10-1. However, Table 10-1 also shows that overwhelmingly VET is funded from government sources.

Table 10-1 Proportion of training hours delivered and source of funding, 2006 to 2011

	2006	2007	2008	2009	2010	2011
Training hours	%	%	%	%	%	%
TAFE and other government providers	85.6	85.4	84.3	83.9	79.6	71.7
Community education providers	3.9	4.5	4.2	4.2	3.8	3.7
Other registered providers	10.5	10.1	11.5	11.9	16.6	24.6
Funding sources						
Commonwealth and state funding	84.1	83.5	82.3	81.8	83.2	86.0
Domestic full-fee paying	12.1	11.7	12.1	11.7	10.9	9.9
International full-fee paying	3.8	4.8	5.6	6.5	5.8	4.1

Source: National Centre for Vocational Education and Research.

- 7 Government funded public and private RTO hours are included in the NCVER data and, therefore, the current assessment recognises the impact of private RTOs.
- 8 There are claims that private RTOs ‘cherry-pick’ training courses, specialising in providing the less costly training courses (such as personal trainers and hospitality workers), leaving TAFEs to provide the capital-intensive, expensive courses (such as engineering and construction). If this reflects the average practice across States, a lower cost weight could be applied to NCVER data relating to private RTOs. A lower cost weight on private RTO annual contact hours would have the effect of reducing needs for States with higher than average shares of population groups most likely to attend courses provided by private RTOs. At present, staff have no data to support a conclusion that a lower cost weight should be applied to private RTOs. However, staff

have sent data requests to the States asking for information on the costs of courses provided by private RTOs and other VET providers.

Staff propose to recommend the commission:

- collect data from the States on the costs of courses provided by private RTOs and other VET providers to determine if a cost weight should be applied to private RTOs.

Cost of services

- 9 In the 2010 Review, the commission used State provided data to determine whether, and if so to what extent, it was more costly to provide services to Indigenous students, students in remote areas, students with low English fluency or students undertaking particular types of courses.
- 10 Staff have sent a data request to the States asking for information on the cost associated with different types of students and courses. Staff propose to use this data to update the cost weights for this assessment in the 2015 Review. A final decision on whether to retain the cost weight for students with low English fluency will be made in the broader context of the commission's approach to CALD and Indigeneity.

PROPOSED CATEGORY STRUCTURE

- 11 Staff propose the following assessment structure for this category in the next review.

Table 10-2 Proposed Post-secondary education category structure

Component	Disability	Influence measured by disability
Service expenses	SDC	Recognises that certain population characteristics affect the use and cost of Post-secondary education services, for example Indigeneity, people in remote areas and people with low English fluency.
	Cross border	Recognises the cost to the ACT of providing Post-secondary education services to people who are New South Wales residents
	Location	Recognises the differences in the cost of providing labour and non-labour resources between States. ^(a)
Other expenses	Administrative scale	Recognises the unavoidable costs each State incurs to provide the policy and administrative infrastructure necessary to provide the minimum unavoidable service, regardless of the size of the task.

(a) Intrastate location effects are captured in the SDC disability.

CHAPTER 11 – PUBLIC HOSPITALS

2010 REVIEW APPROACH

- 1 In the 2010 Review, the Admitted patient services category included State expenses on the care of residents admitted to public or private hospitals. This comprised expenses for acute and non-acute medical care along with costs of mental health institutions, nursing homes for the aged and non-hospital patient transport services. Revenues generated from private patients admitted to public hospitals were offset against expenses.
- 2 The drivers of the assessment were derived using Australian Institute of Health and Welfare (AIHW) data on admitted patient services. The AIHW data were used to calculate national average costs for population groups cross-classified by age, Indigenous status, socio-economic status (SES) and location of patient residence. Assessed costs were derived by applying these national average costs to the number of people in the corresponding population groups in each State. The costs for each population group were added to derive total hospital-based costs for each State.
- 3 A separate assessment of non-hospital based patient transport expenses was made to reflect the additional cost of providing aero-medical ambulance services to people in remote and very remote regions.

NATIONAL HEALTH REFORM AGREEMENT

- 4 In August 2011, the Council of Australian Governments (COAG) agreed to the implementation of the *National Health Reform Agreement*, which will deliver reforms to the organisation, funding and delivery of health care services through increased Commonwealth funding.
- 5 Under the new health reforms, States will continue to be responsible for providing public hospital services. However, in terms of funding, under the arrangements all Commonwealth funding for public hospitals and the majority of State funding will be transferred to a single National Health Funding Pool. Payments will then be made from this funding pool directly to Local Hospital Networks, using a nationally consistent approach to activity based funding (ABF), also referred to as ‘casemix’ funding.

Activity Based Funding

- 6 The move to ABF represents a fundamental shift in the way public hospitals in Australia are funded. It is designed to improve the transparency and accountability of the current health funding arrangements.

- 7 Under the ABF approach, each activity/service within the hospital will be classified and costed. This differs from the current approach where only patients admitted to a hospital are classified using the Australian Refined Diagnosis Related Groups (AR-DRG) classification based largely on their surgical procedure. Under the reforms, National Weighted Activity Units (NWAUs) will take the place of DRGs.
- 8 The Independent Hospital Pricing Authority (IHPA) was established by the Commonwealth in 2011 to calculate and determine the national efficient price. The national efficient price for 2013-14 is \$4 993 per NWAU. These units are calculated for a range of hospital services and procedures.³⁵ For example, a tonsillectomy has a weight of 0.6701, a coronary bypass has a weight of 5.6830, and a hip replacement has a weight of 4.6830.³⁶

Implications for our health assessments

- 9 Unlike under the DRG approach, ABF is intended to cover all outputs of public hospitals that can be measured on the basis of activity, including hospital emergency department visits and outpatient services.³⁷ The funding is designed around a whole-of-hospital approach. This enables all episodes of care within a hospital to be costed, whereas previously it was only those admitted to the hospital that were costed.
- 10 Being able to assess all hospital services on a comparable basis in a reliable way means that there may be no further need to disaggregate hospital services into admitted and non-admitted services, and removes the impediments to having a whole of public hospital assessment category. That is, the new reforms represent a way for all public hospital services to be assessed within a single public hospital services assessment.
- 11 The Admitted patient services category is considered one of the commission's most reliable and robust categories. This is because the data available are of high quality and the expenditure methodology is sound. It would seem logical that if the same type of high quality data were available for other hospital services similar to those available for admitted patients, then the commission should employ the same expenditure methodology to assess those services. In addition, if the Commonwealth and States are moving to a more whole-of-hospital funding approach, then it would seem logical for the commission to move in that direction as well.

³⁵ Adjustments to the price weights are also made for paediatrics, remoteness area, Indigeneity, ICU, private patient services and private patient accommodation.

³⁶ IHPA, *National Efficient Price Determination 2013-14 - Media release*.

³⁷ From 2012-13, acute admitted patients, emergency departments and some outpatient services will be funded using this approach. Other hospital activities will continue to be block funded as they were under the National Healthcare SPP. However, from 2013-14, sub-acute care and mental health services will be funded using the ABF approach. For hospital services where ABF does not work well, like small rural hospitals and specialist services such as teaching and research, block grant funding will be provided from the pool.

- 12 A Public hospitals category would not cover all health services provided by States. There would remain a relatively small residual health category, comprising State community health centre services and public health activities.
- 13 A downside to this approach is that the simple assessment of private sector influences previously captured in the Community and other health services category (through the subtraction model) now becomes more service-by-service focused across the two health categories. On balance, staff consider that there will be an overall improvement in the health assessments through utilising the improved data on non-admitted patients.

Staff propose to recommend the commission:

- adopt a Public hospital services category that includes expenses on admitted patients, emergency departments and outpatient services.

PUBLIC HOSPITAL SERVICES

- 14 A new Public hospital services category would include all expenses related to public hospitals including:
 - Admitted patient services – acute and non-acute medical care and treatment for public patients admitted in public hospitals and public patients treated in private hospitals, and non-hospital based patient transport services provided to people in remote and very remote regions. Plus the net costs faced by States of treating private patients in public hospitals.
 - Emergency department services – all emergency care delivered to presentations at public hospitals.
 - Outpatient services – all outpatient type services such as obstetrics, gynaecology, cardiology, oncology and other non-admitted patient services including pharmacy, pathology, and radiology and imaging services.

Factors affecting service use and cost

- 15 In the 2010 Review, available data showed that there were particular population groups that used public hospital services more intensively than others and that the cost of providing these services to them is above average. These include:
 - Indigenous people
 - people in rural and remote areas
 - socio-economically disadvantaged persons
 - the very young and the elderly.

- 16 Staff consider that these drivers are still relevant and propose to continue to assess them in the 2015 Review. The level of disaggregation of these population groups based on the new proposed materiality guideline thresholds is addressed later in this paper.

Ideal assessment approach

- 17 Staff consider the ideal assessment is to continue with the approach adopted for Admitted patient services, but to expand the data coverage to include all public hospital services.
- 18 Under this approach, each episode of care in every hospital would be allocated an NWAU. These data, along with the patient's personal details, would be used to calculate national average costs for population groups cross-classified by age, Indigenous status, SES and location of patient residence. Assessed hospital-based costs would then be derived by applying these national average costs to the number of people in the corresponding population groups in each State.
- 19 It should be noted that IHPA calculates NWAUs for each service based on the efficient price, but the number of services provided by each State is determined by the policy of that State. By calculating national average use rates this enables us to remove State policy influences on the level of services provided.
- 20 These data for admitted patients are currently available for all hospitals. However, IHPA has advised us that detailed activity and cost data for emergency departments and non-admitted services are currently not available for all hospitals. Data from small hospitals are limited to total episodes and are block funded as a result. IHPA has set a timeframe of 2014-15 for all hospitals that are currently block funded to be able to provide detailed activity and cost data for emergency departments and non-admitted patient services.
- 21 Until comprehensive data become available for all hospital services, we will need to adopt an interim approach.

Interim assessment approach

- 22 Staff believe that although detailed activity and cost data for small hospitals may not be currently available for emergency services and non-admitted services, there is merit in using the partial data that IHPA does have. The following sections explain the coverage of data that we expect to be able to obtain from IHPA and the implications of the data they will not be able to provide.
- 23 **Admitted patients.** As mentioned previously, detailed activity (patient details) and cost data (NWAUs) for all admitted patient services will be available. Staff propose to continue to assess these expenses using the same method that is used in the current assessment.

- 24 In addition, private patients in public hospitals would also continue to be treated in a similar way as they are now, with costs of treating these patients reduced to reflect the residual expenses faced by States in treating these patients, after insurance, Medicare and any out of pocket payments are recognised.
- 25 One difference from the current assessment will be to remove the adjustment³⁸ for the lack of private hospital provision in Darwin. This is because we propose to change our standard geography from the State-based Accessibility and Remoteness Index of Australia (SARIA) to the ABS remoteness areas (ARIA). Under ARIA, all residents of Darwin are treated as moderately accessible. This is consistent with the geography used by IHPA, including for its remoteness adjustments.
- 26 **Emergency departments.** Detailed emergency services activity and cost data are available for all principal referral and large hospitals with formal emergency departments. These hospitals account for approximately 92% of the emergency services data collected by IHPA. The other 8% relate to smaller hospitals, which are block funded and as such, detailed data are not available.
- 27 We intend to use the same assessment approach as we would use for the admitted patients component. National average costs for each population group would be calculated using the data available for the larger hospitals. Assessed hospital based costs would then be derived by applying these national average costs to the number of people in the corresponding population groups in each State.
- 28 Costs for block funded hospitals, where detailed activity data are not available, would be allocated based on the population profile of the larger hospitals where detailed data are available.
- 29 The assumption here is that the user profile and cost profile of small hospitals is the same as for large hospitals. However, this may not be the case. Small hospitals tend to be located in more remote regions where it is not cost effective to provide large hospitals. These regions tend to have higher proportions of Indigenous people and, therefore, our assumption may understate the user and cost profile of those population groups (remoteness and Indigeneity) in our assessment.
- 30 When we receive the data from IHPA we will analyse it and compare it with partial data from the AIHW to determine the extent of any bias. If any bias is large and/or material, we may need to apply an additional adjustment to the assessment. For example, we may allocate the costs from the block funded hospitals based on the population profile of similar sized hospitals in similar regions. This may mean allocating those costs based on hospitals not located in major cities.

³⁸ The adjustment treated the Northern Territory's highly accessible and accessible populations in Darwin as if they were moderately accessible.

- 31 **Outpatient services.** Similar to emergency departments, detailed activity and cost data for outpatient services are available for all larger hospitals. We intend to use the same assessment approach as that proposed for emergency departments. Again, when we receive the data from IHPA, we will analyse it to determine the extent of any bias and apply an additional adjustment if necessary. This adjustment would be similar to adjustments made, if any, in the emergency department component.
- 32 **Patient transport expenses.** In the 2010 Review, the commission made a separate assessment of non-hospital based patient transport expenses. These expenses captured the impact of providing aero-medical ambulance services and the reimbursement of costs through Patient Assisted Travel Schemes (PATs) to people in remote regions.
- 33 Staff propose that these expenses should continue to be assessed separately in the Public hospitals category because a conceptual case has been established and it is material to do so. Staff will send a data request to States to enable us to update the assessment.

Staff propose to recommend the commission:

- for admitted patients
 - continue to assess these expenses by applying the same disabilities as in the current assessment, using NWAU data obtained from IHPA
 - remove the adjustment for the lack of private hospital provision in Darwin given the shift in geography from SARIA to ARIA
- for emergency departments
 - use the same assessment approach as used for the admitted patients component
 - compare data from IHPA and AIHW to determine the extent of any bias, and apply an additional adjustment if the bias is material
- for outpatient services
 - use the same assessment approach as that proposed for emergency departments
- for non-hospital based patient transport expenses
 - continue to assess these expenses separately based on data provided by States.

Materiality of current population groups

- 34 In the 2010 Review, the socio-demographic composition (SDC) characteristics found to drive the cost of health services to States were age, Indigeneity, SES and

remoteness. We consider that these drivers are still relevant and propose to continue to assess them in the 2015 Review.

- 35 Staff undertook materiality testing of the drivers based on the proposed \$30 per capita threshold. The results indicate that Indigeneity (divided into 2 groups), SES (3 groups), and remoteness (5 groups) are still material at the current level of disaggregation. However, when staff tested the materiality of age using data from the current Admitted patients assessment, we found that it was not material to disaggregate using the 7 age groups. Disaggregating the 0 year olds from the 1-19 age group and disaggregating the 85+ age group from the 75-84 age group was not material. The reason is that while those age groups have very different use and cost patterns, the difference in the distribution of populations between the States is small.
- 36 As a result, staff propose to collapse these age groups for the 2015 Review. This would result in disaggregating age into 5 groups in this assessment. This compares with the 7 age groups in the Admitted patients category and 10 age groups in the Community and other health category.
- 37 At this stage, staff intend to use SEIFA as the measure of low SES. However, if the commission moves away from this measure to incorporate an Indigenous specific SEIFA index as part of addressing Indigenous disadvantage, then we will make the necessary adjustments.
- 38 Table 11-1 shows the SDC breakdowns that staff propose to assess in the Public hospitals category for the 2015 Review. The age groupings reflect a proposal to be more consistent across categories where age is assessed differentially.

Table 11-1 Proposed SDC breakdowns in the Public hospitals category, 2015 Review

Indigenous status	ARIA	SEIFA	Age
Indigenous	Major cities	1st quintile	0 to 14
Non-Indigenous	Inner regional	Middle 3 quintiles	15 to 44
	Outer regional	5th quintile	45 to 64
	Remote		65 to 74
	Very remote		75+

Staff propose to recommend the commission:

- maintain the SDC population groups assessed in the 2010 Review, namely Indigeneity, age, SES and remoteness
- disaggregate age into 5 groups instead of 7 groups on materiality grounds.

Impact of the private sector

- 39 In the 2010 Review, disaggregating by location in Admitted patients achieved two things. It covered the higher costs associated with more remote hospitals, but it also covered non-State provision effects. There were less non-State alternatives in more remote regions. However, partly because public and private hospitals have slightly different treatment focuses (public – medical, private – surgical) we didn't make any further distinction. That is, we assumed private hospital provision had the same effects in Sydney as in Melbourne, Perth etc. The exception to this was Darwin, where the data indicated a substantial deficit in private provision, so we treated private provision in Darwin as for other moderately accessible regions.
- 40 In the 2010 Review, emergency department and non-admitted patient service expenses formed part of the Community and other health services category and a subtraction model was used to assess those expenses. The subtraction model assumed State-like services provided in the non-State sector were fully substitutable for those provided in State funded institutions. The higher the level of non-State service provision, the lower the level of services States were required to provide, which, in turn, reduced the pressure on their budgets.
- 41 With the decision to include emergency department and outpatient service expenses in a Public hospitals category, we still propose to make an assessment of the impact of the private sector on those services provided in the State sector. Instead of a subtraction model, an alternative method of assessing the impact of the private sector is to calculate an economic environment factor and then apply that factor only to the proportion of expenses that are assessed as substitutable. A downside to this change in method is undoing the simplification gained in the 2010 Review, because we would now need to calculate an economic environment factor for both emergency department and outpatient services in this category, as well as continuing to separately recognise economic environment influences in the other health category.
- 42 The next section attempts to measure the degree of substitutability for those hospital services and considers data options to measure the impact.
- 43 **Emergency departments.** Under the subtraction model approach we did not need to directly consider the substitutability of emergency department services. Use of these services was captured in the total assessed needs of States, and to the extent similar services were provided by the non-State sector, we reduced the total need to derive the need to be funded by States. However, where we will apply an economic environment factor directly to emergency department services, we need to determine the extent to which these services are substitutable.

- 44 In the AIHW's *Australian health statistics 2011-12*, an estimated 55%³⁹ of the emergency department presentations in public hospitals in 2011-12 were for general practitioner (GP) type presentations. This suggests that about 45% of the presentations to emergency departments are for services that could not be provided by private GPs. As the publication covers only 80% of hospitals and data for some medium and small hospitals in regional areas were not collected, the percentage for GP-type presentations could be higher (around 60%) because of a lack of GP services in regional areas.
- 45 Patients presenting to an emergency department with urgent needs (triage category 1 to 3 patients with life threatening injuries or similar) have limited choice to go anywhere else (there are some private hospitals with emergency department services). As such, 40% of all emergency department presentations should not be regarded as substitutable. For the other 60% where the severity of the injury is regarded as non-urgent, the patient has the choice to see a private GP. The more GPs there are in a State, within comparable remoteness regions, the less need there is for those less serious cases to be seen in an emergency department.
- 46 In this case, an economic environment factor could be developed, but discounted so that it only applies to 60% of emergency department expenses.
- 47 In the 2004 Review, the commission included an economic environment assessment for emergency department expenses but discounted it by 50% to recognise that some procedures in emergency departments could not be provided by GPs.
- 48 Staff are investigating the most appropriate data to calculate an economic environment factor. We believe the simplest and most appropriate assessment would be based on the number of GP-type services provided in each State or a measure based on GP throughput. In the 2010 Review, the commission used Medicare data on the benefits paid for GPs and GP type services to assess substitutability in these areas.

Staff propose to recommend the commission:

- calculate an economic environment factor based on the number of GP-type services provided in each State and apply the factor to 60% of emergency department expenses.

- 49 **Outpatient services.** The provision of outpatient and other non-admitted patient type care is complex. All States tend to provide a similar range of services although there is significant variety both within, and between, States in how these services are delivered. The majority of outpatient type services are delivered in outpatient clinics

³⁹ Australian health statistics 2011-12 (AIHW). Note, the figure is based on larger hospitals only and does not include GP-type presentations to smaller hospital emergency departments.

located in public hospitals. However, outpatient clinics are also located in private hospitals and non-hospital settings like community health centres.

- 50 Outpatient and other non-admitted patient services include a wide range of pre- and post-hospital and clinical treatments, including:
 - the management of chronic conditions, medical and surgical procedures and pain management
 - obstetrics, gynaecology, cardiology, oncology and other specialist services
 - numerous ancillary services, often referred to as allied health, such as physiotherapy, chiropractic, dental, podiatry, dietetics and optical
 - pharmacy, pathology, and radiology and imaging services
 - community-based services like mental health and alcohol and drug treatment.
- 51 The majority, if not all, services provided in public hospital outpatient clinics are also provided in the private sector. There are private gynaecologists, cardiologists, physiotherapists and chiropractors that all offer the same type of service as that provided in public hospitals. There are also pathology, radiology and imaging services that are provided in a private setting.
- 52 However, staff are unsure if the quantity of services provided in the private sector influence the level of services provided in the public sector. While we agree that there is a private alternative for outpatient type services, patient choice in some cases is limited by income constraints. For many of these services States still need to provide the services regardless of the level of private provision in that State.
- 53 In the 2004 Review, the commission decided that there was some degree of substitutability for outpatient type services. However, it was unsure of the level. It decided to adopt the same approach and discount (50%) as it used for emergency patients.
- 54 Staff propose that we adopt the same approach as was used in the 2004 Review and use the same discount for outpatients as that proposed for emergency services.
- 55 Staff are investigating the most appropriate data to calculate an economic environment factor for these services. We believe the simplest and most appropriate assessment would be based on the number of specialist type services provided in each State. In the 2010 Review, the commission used Medicare data on the benefits paid for specialist type services to assess substitutability.

Staff propose to recommend the commission:

- calculate an economic environment factor based on the number of specialist type services provided in each State and, as with emergency departments, apply the factor to 60% of outpatient expenses.

PROPOSED CATEGORY STRUCTURE

56 Staff propose the following assessment structure for this category in the next review.

Table 11-2 Proposed Public hospitals category structure

Component	Disability	Influence measured by disability
Service expenses	SDC	Recognises that age, Indigeneity, socio-economic status and location affect the use and cost of public hospital services.
	Economic environment	Recognises that GP and specialist services are partially substitutable (60%) for emergency department and outpatient services.
	Location	Recognises the differences in the cost of providing labour and non-labour resources between States.
Other expenses	Administrative scale	Recognises the unavoidable costs each State incurs to provide the policy and administrative infrastructure necessary to provide the minimum unavoidable service, regardless of the size of the task

Note: The SDC disability includes the non-hospital patient transport disability.

CHAPTER 12 – COMMUNITY HEALTH

2010 REVIEW APPROACH

- 1 In the 2010 Review, the Community and other health services category comprised all health expenses except those relating to admitted patients and patient transport. It included expenses on non-admitted patient services such as hospital emergency departments and outpatient clinics, and community health and public health services.
- 2 The commission stated that the health needs of State populations were met by a mix of State and private providers. States provide community and other health services through hospitals and community health centres. Similar services are also available in private institutions which are mainly funded by the Commonwealth, private health insurance funds as well as by individuals' out-of-pocket expenses.
- 3 The commission concluded that States had a 'fall-back' responsibility for providing services not provided by the non-State sector or in areas where it is uneconomic for private providers to operate. Hence, the commission adopted a subtraction model to assess those expenses.
- 4 The commission decided that differences between States in the age, gender, Indigenous status, remoteness and socio-economic status of their populations resulted in differences in their need for State-like community and other health services. From the assessed need for total State-like services, the extent to which these services were provided by the non-State sector was subtracted to determine the residual services provided by States.
- 5 The subtraction model assumed that State-like services provided in the non-State sector were fully substitutable for those provided in State funded institutions. The higher the level of non-State service provision, the lower the level of services States were required to provide.
- 6 Some States were critical of the subtraction model and the fully substitutable assumption, indicating that the subtraction model did not reflect their experiences.

COMMUNITY HEALTH SERVICES

- 7 The inclusion of emergency department and outpatient services expenses within the Public hospital services category leaves residual expenses primarily for community health centres and public health services. We propose to assess these expenses in a separate health category – Community health services.
- 8 This category will comprise a much smaller range of State services than in the 2010 Review. As such, it would make it more difficult to develop an assessment using

a subtraction model approach. While substitution may still exist, it would be difficult to identify and isolate those non-State services that only substitute for State services provided outside the hospital. For example, when estimating the total national expenditure on State and State-like community health services provided outside the hospital we would need to only include that proportion of general practitioner (GP) services that we consider a direct substitute for those health services. This is because we consider that some GP services are a direct substitute for emergency department services that are provided in public hospitals.

- 9 To avoid this, a more direct approach, similar to the approach used in the 2004 Review, may be more appropriate.
- 10 The new Community health services category would include:
 - Community health centre services – a wide range of health services provided in a community setting including domiciliary nursing services, well baby clinics, dental health, home nursing services, community health centre programs, family planning, alcohol and drug rehabilitation etc.
 - Public health services – activities for the protection and promotion of health and the prevention of disease, illness or injury. They include organised immunisation, health promotion, screening programs, communicable disease control, and prevention of hazardous and harmful drug use.
 - Mental health services – mental health services provided in a community setting.
 - Other – these includes health research and administration and pharmaceuticals, medical aids etc.

Staff propose to recommend the commission:

- adopt a Community health services category that includes residual expenses on community health centres, public health activities and mental health services
- adopt a direct assessment approach instead of a subtraction model approach.

Assessment approach

- 11 As noted in past reviews, there are very little national data available on the use and cost of community health centres and public health services. In the 2004 Review, proxy data were used to derive use and cost estimates for these services. In the 2010 Review, proxy data from various sources relating to the provision of State and non-State community health services were used to derive use and cost estimates used in the subtraction model. We anticipate that we will again need to use proxy data to build a reliable assessment in this review.

State views are sought on:

- the availability of reliable State data on the use and cost of community health centres and public health services by various population groups that would assist in the development of the assessment.

- 12 **Factors affecting service use and cost.** Broadly, our assumption is that those population groups that use hospital services more intensively will also use community health services more intensively, but not necessarily at the same rate. This is because:
 - community health services are often the first point of contact with the health system
 - they are designed to take pressure off the hospital system
 - there is considerable overlap in the services provided in hospitals and the services delivered to people in a community setting
 - people who need a higher level of medical care than provided by community health services are referred to hospitals.
- 13 In addition, public health activities aimed at the protection and promotion of health outcomes and programs designed for the prevention of disease, illness or injury would also be primarily targeted at these population groups.
- 14 For consistency between the 2 health categories, staff propose assessing the same socio-demographic composition (SDC) characteristics as those in the Public hospitals category — age, Indigeneity, socio-economic status (SES) and remoteness. However, due to the lack of data and the uncertainty of the differential use rates by each population group, staff do not propose disaggregating these groups to the same level as in the Public hospitals category.
- 15 Further, while the commission assessed gender as a component of the SDC disability in the 2010 Review, staff propose not to include gender in this review. Due to the smaller size of the proposed category and the proposed increase in materiality thresholds, staff do not believe that it will be material to include gender in the SDC disability. However, staff will test the materiality of all disabilities later in the review when the assessment has been built.
- 16 Table 12-1 shows the SDC breakdowns that staff propose to assess in the Community health category for the 2015 Review. The only difference from the Public hospitals category is that remoteness is disaggregated into only 2 groups. With limited data on the use of community health services by region, maintaining 5 remoteness categories would represent a false level of precision and not necessarily move us closer to horizontal fiscal equalisation (HFE).

Staff propose to recommend the commission:

- assess an SDC factor that recognises Indigeneity (2 groups), age (5 groups), SES (3 groups) and remoteness (2 groups)
- not assess gender as a component of the SDC factor unless it is material.

Table 12-1 Proposed SDC breakdowns in the Community health services category

Indigenous status	ARIA	SEIFA	Age
Indigenous	Non-Remote	1st quintile	0 to 14
Non-Indigenous	Remote	Middle 3 quintiles	15 to 44
		5th quintile	45 to 64
			65 to 74
			75+

Proxy data

- 17 In the 2004 and 2010 Reviews, proxy data from a number of sources were used to derive use and cost estimates for these services. The use of GP services obtained from the ABS *National Health Survey* was used to proxy an age-gender and SES profile. Indigenous use was obtained from the Australian Institute of Health and Welfare (AIHW) *Expenditure on health for Aboriginal and Torres Strait Islander people*. Remoteness use was obtained from the AIHW public hospital rates by remoteness.
- 18 In the past, developing a user profile for community health type services has consisted of many moving parts and for this reason could be considered to have been overly complex and cumbersome. Staff propose for this review, developing a more transparent and simple assessment. At this stage, staff propose to develop a user profile based on the data received from the IHPA on all public hospital costs (NWAUs), with a number of adjustments.
- 19 Using public hospital data as a proxy for community health and public health services may underestimate the additional use of those services by Indigenous people. The AIHWs *Expenditure on health for Aboriginal and Torres Strait Islander people 2010-11* provides estimates of health funding and expenditure for Indigenous and non-Indigenous people for various health services. Table 12-2 shows the use of community health and public health services by Indigenous people is twice that of their public hospital use. As such, staff propose combining these data with the data from IHPA to get a more accurate measure of Indigenous use of State provided community health services.
- 20 A further issue may be the potential age bias of using hospital data as a proxy for community health services. Hospital data show much greater use by the very young

and the very old. In contrast, community health type services tend to be used by a wider range of ages. Baby clinics and immunisation services are provided for the very young while cancer screening and home nursing services are provided for older people. On the other hand, mental health services and alcohol and drug rehabilitation services tend to be used by people in the middle age groups (15-44 and 45-64).

Table 12-2 State government health funding for Indigenous and non-Indigenous people, by area of expenditure \$per person, 2010–11

Area of funding	Indigenous	Non-Indigenous	Ratio
	\$pc	\$pc	
Public hospital services	1 964	850	2.3
Admitted patient services	1 379	594	2.3
Non-admitted patient services	585	256	2.3
Community health services	1 079	194	5.6
Public health services	142	33	4.4
Research	49	31	1.6
Health administration	32	19	1.7

Source: AIHW Expenditure on health for Aboriginal and Torres Strait Islander people 2010-11 Table 3.5.

- 21 Given the similarities in the services provided by GPs and those provided in community health centres, staff believe that the user profile of GP services could provide a more accurate measure of use of services by age, than will the user profile of public hospital services. However, staff will undertake materiality testing for each dataset to ensure that complexity is not added to the assessment for an immaterial gain.

Staff propose to recommend the commission:

- combine data obtained from the AIHW *Expenditure on health for Aboriginal and Torres Strait Islander people* with the data from IHPA on total hospital costs, to develop a user profile of State provided community health services
- include the age profile of GP services for a more accurate measure of use of services by age only if it is materially different from the age profile of hospital service use.

Impact of the private sector

- 22 There is significant variety both within and between States in how community health services are delivered. While the majority are provided in dedicated community

health centres, they can also be provided in schools, local councils and in client's homes.⁴⁰

- 23 In addition, there is considerable overlap in the services provided in the public and private sector. There are many similarities in the services provided by GPs and those provided in community health centres and public health programs. For example, a GP provides immunisation vaccines as do State funded professionals. GPs also assist people with drug rehabilitation programs, family planning, anti-smoking advice and other health promotion activities.
- 24 Considering this information, it seems that a significant proportion of the community health services provided by the State are substitutable for non-State-provided services. States that have differing numbers of GP services provided, within comparable remoteness regions, are likely to have differing needs for State-provided services. However, in some instances, State-provided services cannot be totally substituted by the private sector. There will always be low SES people who will not be able to afford privately provided services, such as dental and nursing services. States will still need to provide these services regardless of the level of private provision in their State. As a result, staff do not believe that an economic environment factor should be applied to all category expenses.
- 25 In the 2010 Review, the commission was not certain it had identified and removed all of the services that were substitutable so it discounted the assessment by 12.5% by reducing the amount of non-State expenses included in the subtraction model. Staff consider it would be appropriate in this review to similarly apply a 12.5% discount to the economic environment factor.
- 26 Staff are investigating the most appropriate data to calculate an economic environment factor. We believe the simplest and most appropriate assessment would be based on the number of GP-type services provided in each State or a measure based on GP throughput. Staff propose using the same data as used in the emergency department component of the Public hospitals category.
- 27 **Office for Aboriginal and Torres Strait Islander Health (OATSIH) grants.** OATSIH provides direct grants for health, substance use, social and emotional well-being and mental health service delivery to around 280 organisations, of which around 70% are Aboriginal and Torres Strait Islander community controlled or managed. These organisations provide one or more of these services: clinical care and health education, promotion, screening, immunisation and counseling, as well as specific programs such as hearing health, sexual health, substance use and mental health.⁴¹

⁴⁰ AIHW, Australia's Health 2010, pp356-357.

⁴¹ Department of Health and Ageing website. Aboriginal and Torres Strait Islander Health Services.

- 28 The services provided by these non-government organisations are similar to those provided by State governments through community health centres. In the 2010 Review, the commission assessed that the actual distribution of OATSIH grants to non-government organisations reflected the extent to which they reduced the need for State provided services, also discounted by 12.5%. We propose to do the same in this review.

Staff propose to recommend the commission:

- calculate an economic environment factor based on the number of GP type services or a measure of GP throughput in each State but discount it by 12.5% to recognise that some services may not be fully substitutable
- calculate an economic environment factor based on actual OATSIH grants to each State but discounted by 12.5% to recognise that not all of those services are fully substitutable.

PROPOSED CATEGORY STRUCTURE

- 29 Staff propose the following assessment structure for this category in the next review.

Table 12-3 Proposed Community health category structure

Component	Disability	Influence measured by disability
Service expenses	SDC	Recognises that age, Indigeneity, socio-economic status and location affect the use and cost of State-provided community health services.
	Economic environment	Recognises that GP services and OATSIH grants to non-State community health providers are substitutable for State provided community health services (discounted by 12.5%).
	Cross-border	Recognises the cost to the ACT of providing community health services to New South Wales residents.
	Service delivery scale	Recognises the cost of providing services in small population centres.
	Location	Recognises the differences in the cost of providing labour and non-labour resources between States and to different areas within a State.
Other expenses	Administrative scale	Recognises the unavoidable costs each State incurs to provide the policy and administrative infrastructure necessary to provide the minimum unavoidable service, regardless of the size of the task.

CHAPTER 13 – WELFARE

2010 REVIEW APPROACH

- 1 The Welfare and housing category comprised State expenses on the provision of welfare and housing services and grants under the First Home Owners Scheme (FHOS). For the 2015 Review, it is proposed that housing service expenses be assessed as a separate category (details of this assessment are in the Housing chapter).
- 2 Welfare services comprised:
 - family and child services (dominated by child protection-related expenses)
 - aged care services
 - services for people with a disability
 - general welfare services (including assistance to the homeless; women's shelters; information, advice and referral services).
- 3 Table 13-1 shows State actual expenses disaggregated by welfare function.

Table 13-1 Category expenses by function, 2011-12

	Amount	Proportion of total expenses
	\$m	%
Family and child services	3 867	24.3
Aged care services	2 229	14.0
Disability services	6 879	43.2
General welfare	2 943	18.5
Total	15 918	100.0

Note: Includes superannuation and excludes depreciation expenses.

Source: ABS GFS data.

- 4 The socio-demographic composition (SDC) assessment for the welfare part of this category was based on the Australian government pension status and Indigeneity characteristics of the users of each of the main welfare services — child protection services, aged care services and disability services.

ISSUES AND ANALYSIS

- 5 The major issues to be considered for this assessment are:

- ensuring that the recent and impending changes in Commonwealth-State responsibilities for aged care and disability services are adequately reflected in the assessment
- the heavy reliance on data for just one State (Victoria) for the SES assessment for family and child services
- the assessment of general welfare services.

Changes in Commonwealth-State responsibilities

- 6 **Aged care services.** Under the aged care and disability services part of the National Health Reform Agreement, signed by all States other than Western Australia, the Australian Government has effectively assumed full policy responsibility for aged care services. Victoria has recently agreed to the new arrangements with effect from July 2015. The new arrangements have applied for the other States since July 2011⁴² but update terms of reference following that date have instructed the commission not to allow these changes to influence the GST relativities. This review is the first time the changes will have an impact.
- 7 Although the Australian Government has taken over responsibility from the States for aged care services, States will continue to provide specialist disability services to older people under the National Disability Agreement (NDA)⁴³, with the Australian Government making payments to participating States to cover these costs (\$125.3 million in 2011-12). As a result, this function would become a Commonwealth purchase, net expenses would be nil, and no assessment would be required.
- 8 For Western Australia, pre-existing policy and funding arrangements for aged care services will continue to apply. The only State expenses left for this function will be those of Western Australia.
- 9 Clause 3 (e) of the 2015 Review terms of reference says:
where responsibilities for funding and delivering aged care and disability services has not been transferred to the Commonwealth by a State under the NHR Agreement, these responsibilities will continue to be assessed as State services for that State.
- 10 We therefore need to consider making an assessment of needs for Western Australia. As 2015-16 is the year the 2015 Review relativities will be applied, an assessment of Victorian needs will not be required.
- 11 Table 13-2 shows the current GST redistribution resulting from the assessment of needs in the area of aged care services in the 2013 Update. The assessment, net of Commonwealth payments, redistributed \$20.1 million away from Western Australia.

⁴² The Australian Government assumed funding and policy responsibility from this date but did not take on operational responsibility for basic community care services until July 2012.

⁴³ A new regime for disability services is to be introduced for people under 65 through the offices of DisabilityCare. Separate chapter refers.

Going forward, we could retain this assessment and freeze it for Western Australia. The assessment is however not materially different from equal per capita (EPC), using a \$30 per capita materiality threshold. On materiality and simplicity grounds, staff propose an EPC assessment for Western Australia's expenses and the Commonwealth payments it receives.

Table 13-2 Aged care service expenses and Commonwealth payments, GST redistribution, 2013 Update

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Aged care expenses assessment (a)									
Dollars million	19.9	-15.2	-13.5	-28.2	37.4	15.4	-15.1	-0.7	72.8
Dollars per capita	2.69	-2.64	-2.88	-11.15	22.40	29.91	-39.18	-3.12	3.14
Commonwealth payments assessment (b)									
Dollars million	39.4	17.5	-53.8	8.1	-17.3	-6.1	7.7	4.4	77.2
Dollars per capita	5.34	3.04	-11.45	3.22	-10.33	-11.87	20.03	18.58	3.33
Net assessment									
Dollars million	59.3	2.3	-67.3	-20.1	20.2	9.3	-7.4	3.6	94.8
Dollars per capita	8.03	0.40	-14.32	-7.94	12.07	18.04	-19.15	15.46	4.09

- (a) The redistribution is implicit in the Welfare and housing category assessment. It shows the combined effects of socio-demographic composition, service delivery scale and location.
- (b) Includes the following SPPs/NPPs: transitioning for aged and disability - Basic community care maintenance and support, aged care assessment and National Disability SPP (we estimated that 9.2% of the national disability payments were used by Older People).

Source: Commission estimates.

- 12 Given the changed arrangements represent a major change in Commonwealth-State financial relations, we propose to backcast the changes to aged care services into all assessment years.

Staff propose to recommend the commission:

- assess Western Australia's aged care services expenses and Commonwealth payments EPC because a differential assessment would not be material
- to backcast the change to the provision of aged care services.

- 13 **Disability services.** How the commission intends to handle the introduction of DisabilityCare is discussed in the next chapter. This section focuses on the current

assessment of disability services and how it needs to be adjusted to account for the Commonwealth taking full responsibility for disability services for the aged.

- 14 The current assessment is based on NDA and Home and Community Care (HACC) services users. Because the Commonwealth has taken over aged care services, disability related State expenses for people over 65 (over 50 for Indigenous people) that are covered by HACC and the NDA will cease. Therefore, the assessment will need to be modified to remove these users. The Australian Government's National Disability SPP would continue to be treated as having an impact on the relativities.
- 15 In its submission, Western Australia argued against using the interstate distribution of pensioners as a basis for calculating assessed expenses.
- 16 The current assessment calculates national average use rates of disability services by disability pensioners. These use rates are the ratio of total users on a disability pension divided by the total number of disability pensioners, disaggregated by Indigeneity. These use rates are applied to the interstate distribution of Indigenous and non-Indigenous disability pensioners; that is, each State's Indigenous and non-Indigenous disability pensioner numbers are weighted by the average service use rates. We consider this assessment appropriate because it is based on national average use of services.

Staff propose to recommend the commission:

- retain the current disability services assessment but adjust it to remove the impact of users aged 65 and over (over 50 for Indigenous people) because aged care is now a Commonwealth responsibility
- continue to treat the National Disability SPP funding as having an impact on the relativities.

Family and child services

- 17 The 2 drivers of demand for child protection services assessed in the 2010 Review were Indigeneity and low SES. Information on the SES characteristics of families of children the subject of child protection investigations was limited to Victorian data, with partial data for South Australia. Victoria has child protection investigations data broken down by Indigeneity and according to whether the family receives a Commonwealth pension and the type of pension.
- 18 Western Australia highlighted that its child protection case numbers have continued to grow in spite of a strong economy. Nevertheless, staff are of the view that the Western Australian data do not of themselves undermine the current methodology. While Western Australia's out-of-home care numbers have increased over the 6 years to June 2012 at much the same rate as those for the rest of the country, its Parenting Payment (Single) numbers — the main driver of Family and child services in the

current assessment — have also moved broadly in line with the national average numbers.

- 19 Western Australia, Tasmania and the Northern Territory, in their submissions, have argued for the use of more comprehensive data for family and child services. The Northern Territory also asked for a review of the costs of remote Indigenous populations.
- 20 Ideally, we would prefer data along the lines of the Victorian data from all States. We put a case to the Performance and Data Working Group (PDWG), whose role is to monitor and report on the progress of the performance and data components of the National Framework for Protecting Australia's Children, for the States to collect income information as part of the child protection unit record collection that has been under development in conjunction with State line agencies. The focus of the new collection is on children, through child-level unit records, rather than services. However, we have been advised that very few States had access to 'main income source' data and also that jurisdictions had confirmed they were not in a position to consider adding items to the data collection at this juncture. The PDWG therefore recommended that we pursue another option we have had under consideration, namely linkage of the unit record data to Centrelink data on the beneficiary status of families. Unfortunately, this has also not proved possible because of agency resource constraints.
- 21 However, the unit record collection should for the first time provide some fine level geography, although at least 2 jurisdictions have indicated they will be unable to supply postcode-level data for the first results from the new collection (which may not be available until early 2014). Nevertheless, staff are of the view that linking the place of residence of users from the system with the ABS SEIFA index should provide us with an alternative, more comprehensive SES measure than currently.
- 22 **Location disability.** The Northern Territory asked for consideration as to whether remote Indigenous population needs should be included as disabilities in the welfare and housing assessment. In the 2010 Review, we did not have comprehensive data to investigate whether, in addition to Indigeneity and SES drivers, the place of residence of users impacts on the demand for child protection services. We should be able to use the unit record system to obtain not only an SES measure for child protection service users but also test the materiality of a location disability, each dissected by Indigeneity.

Staff propose to recommend the commission:

- use AIHW’s child protection unit record system to derive a location breakdown of service users and link this to ABS SEIFA data to obtain a proxy SES breakdown of family and child service use
- test the materiality of a location socio-demographic disability.

General welfare services

- 23 Staff propose to include State concession expenses on water and electricity subsidies within the Welfare category along with rates and other concessions (see the Services to communities chapter). General welfare services expenses, including concessions, were estimated to be \$3.5 billion in 2011-12. Concessions, including those for water and electricity, were an estimated \$1.6 billion, while net recurrent expenses on homelessness services in 2010-11 were \$491 million.⁴⁴ The remainder comprise a varied group of services, such as prisoners’ aid, care of refugees, pre-marital education and Aboriginal welfare services.
- 24 Staff propose to make an assessment of concessions expense based on concession card holder numbers and a separate assessment of the balance of general welfare services expenses based on the relative proportion of people in the bottom quintile of the ABS’s SEIFI. We propose 2 assessments because they are materially different.
- 25 We use SEIFA as our standard approach to measuring SES in most other categories where it is assessed. However, in general welfare, the data is not available to support a SEIFA based approach. We consider that using SEIFI is a more appropriate means of measuring socio-economic status for a judgement based assessment. Our criteria for using SEIFA and SEIFI is described in the Indigenous and Socio-economic status chapter.

Staff propose to recommend the commission:

- make an assessment of concessions based on concession card holder numbers and a broad assessment of the balance of general welfare services expenses based on the relative proportion of people in the bottom quintile of the ABS’s SEIFI.

Other issues considered

- 26 **Fly-in fly-out workers.** Western Australia has argued that significant State costs associated with fly-in fly-out workers are not captured in a number of categories, including welfare and housing. The issue of fly-in fly-out workers is dealt with in the Mining Related Expenditure chapter.

⁴⁴ Productivity Commission, *Report on Government Services 2013*, Table G1.

- 27 **Cost of living.** Western Australia has argued for a cost of living disability, although the evidence cited is chiefly in relation to housing services. It has drawn attention to a statement by the Western Australian Council of Social Service: ‘The mining and resources boom sustained a long period of economic growth, which while beneficial to some, drove up the cost of living rapidly and had negative impacts on many vulnerable West Australians who were not able to share in the State’s prosperity’.
- 28 Staff investigated this issue during the 2010 Review. The commission concluded that it did not have evidence that differences in cost of living resulted in extra spending on welfare services by States.
- 29 At this stage, the case for an assessment of cost of living is mainly conceptual. It can be argued that a higher cost of living would result in greater financial stress for people on low incomes. This greater financial stress may lead to higher rates of homelessness and child protection cases. However, there are no data available that demonstrate that differences in relative cost of living between States would lead to greater use of State welfare services.
- 30 Another issue is that there are no comprehensive measures of interstate (not just capital city) cost differentials available. In 2003, the ABS published an experimental measure of cost of living but it has not been updated since.
- 31 We conclude that, while the conceptual case is plausible, it is not strong enough, in the absence of reliable data that demonstrate a relationship, to make an assessment for cost of living differentials.

Staff propose to recommend the commission:

- not pursue this issue further unless reliable data can be provided linking high cost of living to greater level of provision of welfare services.

Proposed assessment structure

- 32 Staff propose the following assessment structure for this category in the next review. In line with the Interim Assessment Guidelines, we propose to break welfare services expenses down into its components to improve the understanding and transparency of the socio-demographic composition assessments.

Table 13-3 Proposed Welfare category structure

Component	Disability	Influence measured by disability
Family and child	SDC	Recognises that Indigeneity, low SES and location population characteristics affect the use and cost of providing services
	Location	Recognises the differences in the cost of providing labour and non-labour resources between States and to different areas within a State
	Service delivery scale	Recognises the cost of providing services in small population centres
Disability services	DisabilityCare - SDC	State proportion of tier 3 clients
	Non-DisabilityCare - SDC	Recognises that Indigeneity and low SES population characteristics affect the use and cost of providing services
	- Location	As above
Aged care services (WA only)	SDC	Assessed equal per capita
General welfare	SDC	Recognises that low SES population characteristics affect the use and cost of providing services
	Cross-border	As above
	Location	As above
Other expenses	Administrative scale	Recognises the unavoidable costs each State incurs to provide the policy and administrative infrastructure necessary to provide the minimum unavoidable service, regardless of the size of the task.

CHAPTER 14 – PRIORITY ISSUE

DISABILITYCARE AUSTRALIA

INTRODUCTION

- 1 The States have long provided substantial disability care and support services, and needs have been assessed by the commission. DisabilityCare Australia provides an alternative way of funding and providing these services. Some States have said there may also be residual State expenses on disability services.
- 2 Clause 5 of the terms of reference for the 2015 Review ask the commission to:
...consider the most appropriate treatment of disability services during the transition to DisabilityCare Australia (the National Disability Insurance Scheme) and once the full scheme is operating nationally.
- 3 The process for implementation involves 3 phases: trials, transition and full implementation. An information paper setting out how the commission might respond to changes flowing from the proposed DisabilityCare arrangements under certain assumptions was distributed to States in April. Many of the uncertainties associated with the introduction of DisabilityCare have been resolved since that paper was prepared. In particular, all States have signed on to DisabilityCare and the timelines of the launch phase, transition periods and full implementation dates in each State have been agreed (Table 14-1).

Table 14-1 DisabilityCare implementation (a)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Launch	2013	2013		2014	2013	2013	2014	2014
Transition	2016	2016	2016	2016	2016	2016	2016	2016
Full implementation	2018	2019	2019	2019	2018	2019	2019	2019

(a) Implementation is July of the relevant year.

Source: <http://www.disabilitycareaustralia.gov.au/roll-out-disabilitycare-australia>.

LAUNCH PHASE

- 4 The first stage of the implementation, which began in July this year, involves trials in New South Wales, Victoria, South Australia and Tasmania for the provision of personalised support for people with significant and permanent disability (known as Tier 3 clients). Trials will extend to the ACT, the Northern Territory and Western Australia in July 2014. Queensland is not participating in the trials.

- 5 Over the three year launch phase from 2013-14, around 30 000 people will be involved in the new arrangements.⁴⁵ A participating State will be expected to contribute an additional negotiated amount per client included in the trial over and above that which it currently provides per Tier 3 client.
- 6 The associated Commonwealth payments also begin in 2013-14 and hence would be relevant for the 2015 Review. Staff have proposed, in the Discussion paper sent to States for the 2014 Update, that the Commonwealth payments and expenses associated with the trials be treated as having no impact on the relativities. Staff will propose that this treatment be continued in the 2015 Review.

Staff propose to recommend the commission:

- treat the Commonwealth payments and expenses associated with the DisabilityCare trials as having no impact on the relativities.

TRANSITION PERIOD

- 7 The transition phase runs from July 2016 to June 2019 (June 2018 for New South Wales and South Australia). During the transition, the States and the Commonwealth will make contributions to DisabilityCare, which will fund services in all States. At this stage, eligible participant numbers have only been agreed for the ACT.
- 8 While all States have now signed up to DisabilityCare, and the span of the transition period for each State has been settled, there remains uncertainty as to the rate at which eligible participants will move across to DisabilityCare in each State.
- 9 During transition, disability services will be provided and funded in 2 separate ways: one phasing in as the other is phasing out. What States do will change over this period. The commission has 2 options to capture this change:
 - It could introduce a ‘blended’ assessment approach, with concurrent assessments of State needs in relation to both DisabilityCare and the current disability services. The relative importance of the 2 service delivery methods would be adjusted over time to reflect the change in the proportion of expenses on each type of service. A blended assessment would be introduced from 2016-17 as all States start the transition.
 - Alternatively, a ‘switch’ approach could be adopted, with the current assessment switching to an assessment of needs under DisabilityCare arrangements at the point when DisabilityCare is judged to become average

⁴⁵ In Western Australia, an additional 4 000 people will be eligible to participate in the ‘My Way’ launch site which is being trialled alongside the national DisabilityCare Australia model which involves similar numbers.

policy. This point would be when a majority of the 460 000 people ultimately to be covered by DisabilityCare have moved to the new arrangements and is likely to be in either 2017-18 or 2018-19.

- 10 State views are evenly split on these 2 options. Queensland, Tasmania and the ACT are broadly supportive of a 'blended' assessment approach during the transition phase along the lines advocated in the commission's April Information paper. New South Wales, Victoria and the Northern Territory support a 'switch' approach. New South Wales and Victoria both consider that DisabilityCare should be viewed as common policy once the majority of the population is covered by the scheme. The Northern Territory has suggested that the switch should occur when a majority of disability clients and also a majority of participating States have entered the scheme. South Australia has proposed that the current assessment of needs methodology should continue right up to the point of 'full implementation' — the point when DisabilityCare Australia is fully functioning. Western Australia did not comment on this issue.
- 11 Tasmania noted that during transition, the States' share of the increased Medicare Levy for disability care will become available to States. This will mainly happen once a State has a majority of its eligible DisabilityCare population participating.⁴⁶ Tasmania considered the Medicare Levy should be assessed actual per capita both in the transition or subsequent years, consistent with the treatment of other Commonwealth payments.
- 12 Because States will be provided disability services in 2 ways over a period of 2-3 years, staff consider that a 'blended' assessment approach is appropriate. Average policy in the transition years will be to have some proportion of services funded through DisabilityCare and some portion delivered directly through State budgets.
- 13 Staff propose that, for the transition years, the assessment of State contributions to DisabilityCare would be based on each State's proportion of the total number of people ultimately to be covered by DisabilityCare. Using actual numbers of people covered in transition years would not be policy neutral. For example, if a State moves at a relatively fast rate towards full implementation of DisabilityCare, staff view this as a matter of policy choice and so should not be taken into account in the equalisation process.
- 14 For the existing State provided services, staff are proposing that these be assessed as currently, using the approach set out in the Welfare services chapter.

⁴⁶ States will be able to draw down from the DisabilityCare Australia Fund when at least 50% of their eligible population is covered. To support early establishment costs, States may also be able to access part of their annual allocation once they have clients participating in the scheme.

- 15 If Commonwealth National Disability specific purpose payments and other disability and community care national partnership payments continue (no information is available on this), then they will continue to have an impact on the relativities. Staff also agree with Tasmania that State drawdowns from the DisabilityCare Australia Fund both during transition and in subsequent years should be treated as Commonwealth payments and have an impact on the relativities.

Staff propose to recommend the commission:

- maintain 2 disability services assessments for the transition period — one for DisabilityCare (assessed using State shares of the total number of people ultimately to be covered) and one for other State expenses associated with disability services (assessed as proposed in Chapter 13)
- treat any associated Commonwealth payments, including State draw-downs of the Medicare Levy from the DisabilityCare Australia Fund, as having an impact on the relativities.

FULL IMPLEMENTATION

- 16 DisabilityCare will provide full coverage in July 2019 (July 2018 in New South Wales and South Australia). So full implementation would be expected to occur in 2019-20.
- 17 When the scheme is fully operational, the intention is that each State would contribute the same per capita amount. Under the agreements, the total contribution from the States will be first reviewed in 2023 and every five years thereafter following the publication of the Census data. As a result, the per capita contribution will remain unchanged between reviews. In between reviews, the per capita contributions will become out of sync with actual population change. To ensure that the impact of changes in State population are recognised in the GST distribution, we propose to assess State' contributions actual per capita (APC).
- 18 As in the transition period, if Commonwealth disability and community care funding continues, we propose to treat it and the drawdowns of the Medicare Levy from DisabilityCare Australia Fund as having an impact on the relativities.
- 19 Commonwealth contributions to the DisabilityCare Australia Fund will have no effect on State budgets and will be ignored. Similarly, any purchases by DisabilityCare Australia of State services would have no impact on the relativities.
- 20 It remains to be seen whether States will continue to operate their own disability services once DisabilityCare is fully operational. Western Australia, Tasmania and the ACT have indicated that there may be some residual service delivery expenses. According to its Heads of Agreement, the New South Wales Government will not

provide any residual specialist disability services or basic community care services once DisabilityCare is fully operational.

21 The Productivity Commission has observed that⁴⁷:

..the overwhelming majority of current NDA users would be likely to access their supports from the NDIS after its implementation ... ‘high-level’ HACC users (those who receive more than one hour of support per day) would be covered by the scheme. What is less clear is whether all ‘low-level’ HACC users would get the same level of services using the NDIS assessment criteria ... The Commission considers that States and territories would have a small, residual role in meeting the care and support needs of these individuals. States and territories would also have a role in meeting significant, but shorter-term support needs, such as the needs of someone who had two broken legs or someone undergoing treatment for cancer.

22 While it is too early to be definitive about how the commission might treat residual services, staff consider the general approach would be to continue a blended assessment as long as the assessment for residual services remained material. If this assessment were to become immaterial after full implementation (or in transition), the commission would then need to consider how to assess it. That would be a matter for the commission in an update.

Staff propose to recommend the commission:

- assess State needs for their DisabilityCare contributions, APC from 2019-20 onwards
- treat any Commonwealth payments for disability and community care services, if they continue, and drawdowns of the Medicare Levy from DisabilityCare Australia Fund, as impacting on the relativities
- ignore Commonwealth contributions to the DisabilityCare Fund and ensure any purchases by the fund of State services has no effect on the relativities
- consider the treatment of any residual service delivery once DisabilityCare is fully implemented or if the assessment became immaterial.

BACKCASTING

23 The commission has said that for major changes in Commonwealth State financial relations it would consider backcasting. That requires the average policy operating in the year GST shares are to be used, to be retrospectively applied in the historical years used to calculate those shares.

⁴⁷ Productivity Commission, *Disability Care and Support: Inquiry Report Volume 1*, July 2011, pp.195-6.

- 24 Only 2 States have commented on the question of backcasting the DisabilityCare arrangements. Tasmania has indicated support for backcasting but has recognised it may be hard to implement in practice. On the other hand, South Australia does not support backcasting.
- 25 We consider that backcasting is desirable on contemporaneity grounds and may be feasible if reliable data are available.
- 26 The prospective ratios of State DisabilityCare and non-DisabilityCare expenses to total expenditure in the application year would be used to apportion historical data. That data would need to be provided by States in advance and based on their own expense forecasts. With a blended system being average policy in 2016-17, this would require the incorporation of such projections beginning in the 2016 Update. Depending on transition arrangements, the materiality of the GST distribution may not be particularly sensitive to the ratio used, and so the reliability of the data may not be compromised by moderate errors in individual State forecasts.

Staff propose to recommend the commission:

- if feasible, backcast the blended disability services arrangements to reflect the policies in operation in the application year, unless the terms of reference direct us otherwise.

CHAPTER 15 – HOUSING

2010 REVIEW APPROACH

- 1 Net housing expenses were assessed in the Welfare and housing category in the 2010 Review. This was because the commission considered all welfare and housing services were affected by the same use and cost drivers. Net expenses were assessed because the commission recognised that, under average policy, the main role of the States was the provision of subsidies to social housing providers. This was because social housing was provided in most States by public non-financial corporations (PNFCs) and State governments provided subsidies to these providers. States also provided subsidies to community housing providers and other housing assistance.
- 2 Net housing expenses comprised:
 - net expenses on the management and maintenance of social housing services provided by the general government sector (with rents deducted from gross expenses) or subsidies where services are delivered via PNFCs or community housing providers
 - home loans and other forms of home purchase assistance including interest rate assistance and First Home Owners Scheme (FHOS) expenses
 - private rental assistance.
- 3 The net housing assessment recognised that States needed to spend different amounts because of differences in the socio-economic status (SES) of their populations and differences in their shares of the Indigenous populations. This was because the commission found that social housing use differed according to Australian government pension status (a proxy for SES) and Indigeneity. It also found that providing housing subsidies for Indigenous people cost more. An Indigenous cost weight was applied.
- 4 An actual per capita assessment was made for grants under the FHOS because all States followed a common policy.
- 5 The commission decided that the Remote Indigenous Housing NPP should not impact on the relativities because these payments funded improvements to assets not owned by State governments. These assets were mainly owned by ICHOs.

ISSUES AND ANALYSIS

- 6 The major issues to be considered for this assessment are:
 - the scope and structure of the assessment
 - how gross housing services expenses would be assessed

- how a revenue assessment would be undertaken
- whether a separate revenue assessment is necessary
- how FHOS expenses would be assessed
- how housing capital expenditure and depreciation would be assessed
- how the Remote Indigenous Housing NPP should be treated.

Scope and structure of the assessment

- 7 The commission has decided to expand the scope of fiscal equalisation and treat housing services, including those provided through PNFCs, as a general government function. Unlike many services provided through PNFCs, housing services have few commercial features. They have more similarities to the services provided by general government agencies. They depend on government funds to meet operating costs and pay for major investment; the services stem from social policy objectives; and government departments make the policy on service delivery and charges. In 3 States, housing is delivered by government departments.
- 8 Under this approach:
 - The adjusted budget will be a consolidation of the operating statements of the general government sector and the housing PNFCs. It will include the revenue, expenses including depreciation, and investment of housing PNFCs, but not transfers between the States and their PNFCs, such as concessions, subsidies and dividends. Subsidies to community providers will continue to be included.
 - There will also be a consolidation of the balance sheets so infrastructure stocks will include the general government stocks plus those of housing PNFCs. State Net Financial Worth (NFW) will exclude State equity in those PNFCs.

For reasons of transparency and to assist in understanding the assessment of the various components of housing services, staff propose to recommend the commission:

- assess housing services as a separate category comprising gross expenses, revenues and FHOS
- assess housing investment and depreciation in the investment and depreciation categories as for other services. This will ensure they are assessed in the same way.

- 9 Table 15-1 shows consolidated expenses on housing and the revenue collected in 2011-12.

Table 15-1 Housing operating expenses and revenue, 2011-12

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Housing services									
Gross operating expenses	1 523	1 157	941	931	726	129	68	189	5 663
Depreciation	317	166	168	127	92	27	16	16	929
Gross operating expenses net of depreciation	1 206	991	773	803	634	102	52	173	4 734
Revenues	-901	-414	-347	-402	-297	-72	-85	-24	-2 542
Net operating expenses	305	577	426	401	338	30	-33	148	2 192
FHOS	262	203	138	105	48	13	18	7	795
Total net expenses (a)	568	780	563	506	385	43	-14	156	2 987

(a) Net operating expenses excluding depreciation, plus the FHOS.

Source: Staff calculation using State data.

- 10 Table 15-2 shows consolidated housing capital expenditure by State.

Table 15-2 Housing capital expenditure, 2011-12

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Purchase of new non-financial assets (a)	421.4	502.4	234.0	430.0	200.5	39.0	56.9	164.4	2 048.6
<i>Minus</i>									
Sales of non-financial assets	-187.8	-41.6	-3.3	-92.8	-102.0	-11.8	-85.1	-8.5	-532.9
<i>Equals</i>									
Total gross fixed capital formation	233.6	460.7	230.7	337.2	98.5	27.2	-28.2	155.8	1 515.5
<i>Minus</i>									
Depreciation	317.0	166.1	167.5	127.3	92.2	26.7	16.0	16.1	928.9
<i>Equals</i>									
Net acquisition of non-financial assets	-83.4	294.6	63.2	209.9	6.3	0.5	-44.2	139.7	586.6

(a) Including assets acquired below fair value.

Source: ABS GFS.

A gross housing services assessment

- 11 There are 4 types of social housing supported by States:
- public housing, which includes publicly owned or leased dwellings administered by State governments
 - State-owned and managed Indigenous housing (SOMIH)
 - Indigenous community housing organisation (ICHO) dwellings
 - mainstream community housing, managed by not-for-profit organisations.
- 12 Public housing is the dominant component of the social housing stock but community housing has been growing rapidly in recent years, albeit from a low base. Table 15-3 shows the distribution of social housing dwellings by State and program.

Table 15-3 Social housing dwellings by program

	End of June 2007	End of June 2012	Percentage growth	Dwellings as a share of total
	No	No	%	%
Public housing	339 771	330 906	-2.6	78.8
SOMIH	13 098	10 047	-23.3	2.4
Community housing	34 707	61 563	77.4	14.7
Indigenous community housing	21 127	17 543(a)	-17.0	4.2
Total	408 703	420 059	2.8	100.0

(a) End of June 2011.

Note: Public housing and SOMIH data are total dwellings; community housing data are total tenancy rental units for which remoteness area information are available; Indigenous community housing data are permanent dwellings. Data may not be comparable across States and over time.

Source: Productivity Commission, *Report on Government Services 2013*, Table 16A.3.

- 13 **Impact of socio-demographic composition on use.** As in the 2010 Review, staff proposed to continue to recognise that the main differences in the socio-demographic composition (SDC) of State populations which affect State expenses are differences in income and Indigeneity status. In addition, we propose to include the impact of location.
- 14 This is in response to a request by the Northern Territory that the commission consider an additional cost weight for the Indigenous population living in remote areas. Table 15-4 shows households in social housing as a percentage of total low income households split by Indigeneity and location using data from the 2011 Census by region. Use rates of social housing are much higher in remote and very remote regions compared to other regions, especially for Indigenous households. This is a reflection in part of there being fewer private rental alternatives in remote regions. In very remote areas, more than 84% of low income Indigenous households live in social housing. Consequently, we consider that an assessment of location is warranted.

Table 15-4 Social housing use rates by Indigeneity and location, low income households, 2011 Census

	Indigenous	Non-Indigenous
	%	%
Major cities	38.5	11.0
Inner regional	29.0	6.9
Outer regional	34.7	7.1
Remote	61.3	8.1
Very remote	84.1	8.6

Source: Staff calculations based on 2011 Census.

- 15 **Indigeneity – cost.** In the 2010 Review, the commission assessed an Indigenous housing cost weight. The evidence available from State data and third party data sources indicated that after removing location effects, gross expenses per dwelling occupied by Indigenous people were about 25% higher than for non-Indigenous people.⁴⁸ For example, the Northern Territory gross maintenance expenses on urban public housing dwellings with Indigenous households were on average found to be around 1.25 times higher than those for non-Indigenous households. Over the 7 years to 2007-08, SOMIH operating expenses per dwelling averaged 1.26 times those for public housing.⁴⁹
- 16 We propose to retain the weight of 25% for Indigenous households.
- 17 This adjustment does not take into account the contention of a lower capacity of Indigenous tenants to pay rents.
- 18 **Other cost influences.** It is also possible that differences in the costs of managing and maintaining social housing in different areas of the States should be recognised in this assessment. The regional cost gradient, including the State specific adjustment, provides some allowance but this may not be sufficient. States are invited to provide evidence relating to this issue.
- 19 **Cost of living.** Western Australia's submission argued that economic growth increased the cost of living, and as a consequence the demand for social housing. It illustrated its reaction to the higher cost of living in remote areas through the income classifications used by Western Australia's Department of Housing to determine public housing eligibility. Income thresholds for eligibility are higher in remote areas compared to non-remote areas.

⁴⁸ For the net assessment, the 25% weight was doubled to 50% on the basis that rental incomes recover around 50% of gross expenses.

⁴⁹ Across the 4 States that still have SOMIH, this ratio averaged 1.30 in 2010-11 and 1.39 in 2011-12.

- 20 Public housing income eligibility limits across the jurisdictions are summarised in Table 15-5. This shows that Western Australia has tighter eligibility criteria than most other States even in remote areas. This accords with the commission's conclusion in its 2010 Review report that there was no clear evidence that States reacted to the higher demand by increasing the services provided. In fact, the commission noted that it observed that most States react to the higher demand by imposing tighter eligibility criteria on their services. This took the form of reducing income thresholds or periodically reassessing eligibility.
- 21 At this stage, staff do not propose to pursue this issue. The conceptual case has not been proven.

Table 15-5 Public housing broad weekly income eligibility limits

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
	\$	\$	\$	\$	\$	\$	\$	
Single person	560	501	609	430(d)	970	501	663	711
Couple, no dependants	775	868	755	580(e)	1 268	868	829	922
Family with 2 dependent children	1 140(a)	991(b)	999(c)	930(f)	1 566(g)	936(h)	1 051(i)	1 231(j)
	%	%	%	%	%	%	%	%
Public housing proportion of all private dwellings	3.9	2.9	2.8	3.5	5.7	4.9	7.6	6.2

(a) \$925 for 1 parent family.

(b) \$1 022 if at least one child is aged between 13-17 years and \$936 for homeless with support and special housing needs.

(c) \$877 for 1 parent family.

(d) \$610 for North West and remote areas.

(e) \$580 for single income, \$670 for dual income. \$820 / \$940 for North West and remote areas.

(f) \$695 for 1 parent family. \$1320 / \$980 for North West and remote areas.

(g) \$1 417 for 1 parent family.

(h) \$902 for 1 parent family.

(i) \$918 for 1 parent family.

(j) \$1 074 for 1 parent family.

Note: Eligibility criteria for access to SOMIH and community housing are generally consistent with those for public housing. Eligibility is also subject to meeting an assets test.

Source: State housing authority websites, AIHW public housing dwelling numbers and 2011 Census total dwelling numbers.

Staff propose to recommend the commission:

- include the following drivers in the SDC assessment for gross housing expenses:
 - low income
 - Indigeneity (use and cost)
 - location
- make no assessment of the impact of cost of living on the demand for housing services, unless States can provide direct evidence that States are providing more social housing as a result of high cost of living.

Any evidence States have relating to differences in unit cost by location is sought.

- 22 **Data.** In the 2010 Review, SDC for housing expenses was assessed jointly with welfare expenses using Australian Institute of Health and Welfare (AIHW) data on users of social housing disaggregated by pension status and Indigeneity. Western Australia did not support this approach.
- 23 Separating out housing from welfare services is freeing us to consider alternative datasets to measure needs and additional drivers. We have identified 2 possible datasets for the SDC assessment:
 - AIHW social housing data
 - Census data.
- 24 **AIHW data.** AIHW data are currently used in our assessment. The AIHW collects household characteristics for each of the 4 social housing types, but they have some limitations.
- 25 While public housing and SOMIH administrative data are available by income, Indigeneity and location, the Indigenous unknowns account for around 30% of the total public housing household numbers. The high percentage is largely due to the extensive under-reporting of New South Wales Indigenous households.
- 26 Mainstream community housing and ICHO information is collected through surveys completed by community housing organisations and through administrative data from State housing authorities. Detailed mainstream community housing survey data breakdowns are not available for all States. For ICHOs, the only data available are dwelling numbers broken down by location.
- 27 The AIHW data do however have one advantage. They are available on an annual basis.
- 28 **Census data.** Household numbers by landlord type are available from the 2011 Census. The landlord type, 'State or Territory housing authority' provides a measure of public housing plus SOMIH while the landlord type, 'Housing

co-operative/community/church group' provides a measure of the remainder of social housing—mainstream community housing plus ICHO housing.

- 29 The main advantage of using Census data is that all social housing types can be disaggregated by all relevant socio-demographic characteristics.
- 30 The differences between the Census data and that collected by the AIHW are shown in Table 15-6. The Census count of the total number of social housing households is 9.4% lower than that indicated by AIHW data. Both datasets have limitations on the identification of Indigenous households. Both rely on self-identification but, the Indigenous unknowns represent only 1% of Census social housing household data, and around 30% of the AIHW total public housing household numbers.

Table 15-6 Comparison of Census and AIHW data on social housing household numbers, June 2011

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.
Census households	127 022	64 340	64 140	37 455	45 145	11 892	10 084	9 426	369 504
AIHW households	142 562	74 710	68 521	40 631	47 104	12 159	11 464	7 198	404 349
% difference	12.2	16.1	6.8	8.5	4.3	2.2	13.7	-23.6	9.4

Note: AIHW community housing data for the Northern Territory and ICHO data for all States are dwelling numbers.

Source: ABS, 2011 Census and Productivity Commission, *Report on Government Services 2013*, Tables 16A.3, 16A.4.

- 31 **Conclusion.** While both the AIHW and census data have disadvantages, staff consider that, on balance, the Census data are better because they are comprehensive across States for all social housing types. They can, therefore, be disaggregated by all relevant socio-demographic characteristics. Moreover, the census Indigenous household numbers would seem more reliable.

Staff propose to recommend the commission:

- use Census data for assessing housing expenses.

- 32 **SDC factor calculation.** The SDC factor was obtained by deriving use rates of social housing dwellings for households disaggregated by income, Indigeneity and location and incorporating an Indigenous housing cost weight of 25%. These national average ratios were applied to each State's household numbers disaggregated by the same socio-demographic characteristics.

- 33 Low income households have been defined as those with an equivalised income less than \$31 200 a year (\$600 per week).⁵⁰ Census data indicate that low-income households defined in this way equate to the bottom 2 income quintiles (or, more precisely, the bottom 42% of households). An equivalised income of less than \$600 per week corresponds fairly closely to average income eligibility thresholds for access to public housing for a single person (refer to Table 15-5).
- 34 Table 15-7 shows the proposed SDC factors for the 2015 Review.

Table 15-7 SDC factors, 2011-12

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Proposed gross SDC factors	0.999	0.902	1.038	0.984	1.080	0.997	0.648	2.835	1.000

Source: Staff estimates.

- 35 The main difference between the proposed and 2010 assessment is the change from using individual pension recipients to measure demand for services to using the Census numbers of households living in social housing.⁵¹ This occurs because the interstate distribution of pensioners differs from that of low income households.
- 36 The introduction of location as a driver also has an impact on the factors.
- 37 **Simplifying the assessment.** For the Indigenous population, making adjustments to household numbers for differences in use according to their income and location characteristics is not materially different from using Indigenous population shares. This is shown in Table 15-8. However, this is not the case for the non-Indigenous population (Table 15-9). The assessed expenses for the non-Indigenous population based on the proposed method are materially different from those based on non-Indigenous population shares.
- 38 This difference in outcome for Indigenous and non-Indigenous populations mainly reflects greater differences between States in the proportions of the non-Indigenous population on low incomes compared with the proportions of the Indigenous population on low incomes.
- 39 To simplify the assessment, staff propose using Indigenous population shares to assess State needs for Indigenous housing, and the proposed method to assess needs for non-Indigenous housing.

⁵⁰ The equivalised household income of a household is derived as the amount of disposable cash income that a single person household would require to maintain the same standard of living as the household in question, regardless of the size or composition of the latter.

⁵¹ In the 2010 Review, a household with 2 pensioners would be counted twice.

Table 15-8 Assessed Indigenous gross expenses, 2011-12

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Indigenous assessed expenses (\$m)	254	58	228	100	52	32	6	84	815
Indigenous assessed expenses based on population shares (\$m)	254	58	230	107	46	29	7	84	815
Difference (\$m)	-1	-0	1	7	-7	-3	1	0	10
Difference (\$pc)	-0.10	-0.02	0.31	3.06	-4.08	-4.95	3.24	0.68	0.45

Source: Staff estimates.

Table 15-9 Assessed non-Indigenous gross expenses, 2011-12

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Non-Indigenous assessed expenses (\$m)	1 263	1 019	752	370	364	87	46	18	3 920
Non-Indigenous assessed expenses based on population shares (\$m)	1 268	993	776	410	290	88	65	29	3 920
Difference (\$m)	5	-254	24	40	-74	1	19	11	100
Difference (\$pc)	0.67	-4.56	5.27	16.62	-45.09	1.53	51.18	49.46	4.43

Source: Staff estimates.

To make the assessment as simple as possible, staff propose to recommend the commission:

- recognise the impact of income and location on the use of social housing services by non-Indigenous people in the SDC assessment for gross housing expenses
- recognise Indigenous population shares in the SDC assessment for Indigenous people because this is not materially different from recognising differences in use patterns by income and location; this should be reviewed following the next census
- a 25% cost weight for Indigenous dwellings be assessed, subject to any change in the percentage of cost recovery.

A separate revenue assessment?

- 40 In the 2010 Review, housing expenses were assessed net of revenue, which are largely rents paid. This was because the influences on the use of services (low income and Indigeneity) were considered to have the same but offsetting influences on the amount of rent paid. For example, a higher proportion of social housing users in a State would result in greater expenses but would also result in more rents paid, other things being equal. These 2 influences were considered to offset each other.
- 41 In the 2010 Review, Western Australia and the Northern Territory argued that there were additional influences on revenue that should be taken into account. They asked for an adjustment to allow for the lower proportion of costs typically recovered through rent collected from Indigenous tenants. We have investigated this issue again, examining the value of rents paid and rent collection rates.
- 42 **Rent paid by Indigeneity, income and location.** Data from the 2011 Census were used to analyse rents paid, disaggregated by Indigeneity, income and location.⁵² Table 15-10 shows that, on average, Indigenous households paid more rent than non-Indigenous households across all regions and high income households paid more rent than low income households, also across all regions. Rent paid decreased as the level of remoteness increased. This suggests that Indigeneity, income and location should be assessed as part of a revenue assessment.
- 43 As Census data are based on self-reporting of rents paid, there is a possibility that respondents reported gross rent paid, including rental rebates. However, if this effect exists, it is likely to be spread across all households and therefore would not have a significant impact on the assessment.

Table 15-10 Average weekly rents paid by households in social housing, by Indigeneity, income and location

	Indigenous		Non-Indigenous	
	Low-income	High-income	Low-income	High-income
	\$ per week	\$ per week	\$ per week	\$ per week
Major cities	137	206	119	201
Inner regional	138	169	116	159
Outer regional	122	155	105	152
Remote	103	144	95	147
Very remote	71	88	82	74

Source: Staff calculations based on 2011 Census.

⁵² Rents paid were captured in response to 2011 Census question 58: 'How much does your household pay for this dwelling?'

- 44 **Rent collection rate.** The rent collection rate was examined by type of social housing, to gauge whether collection rates vary between Indigenous and non-Indigenous households. Table 15-11 shows that rent collection rates, defined as the total rent collected as a percentage of the total rent charged, are similar for public housing and SOMIH.⁵³

Table 15-11 Social housing rent collection rates

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
	%	%	%	%	%	%	%	%	%
Public housing									
2009-10	100.0	99.0	100.3	101.2	99.8	99.0	99.5	103.8	99.8
2010-11	99.2	98.7	100.9	100.7	100.0	99.0	99.5	102.7	99.6
2011-12	99.1	98.5	99.4	100.7	100.3	98.6	99.7	99.0	99.3
SOMIH									
2009-10	101.5	..	101.5	104.5	100.7	101.7	99.7
2010-11	104.0	..	99.3	..	99.9	99.0	101.7
2011-12	100.0	..	100.6	..	100.7	98.6	100.5
Community housing									
2008-09	96.6	99.1	99.0	98.8	100.3	99.7	95.8	na	98.1
2009-10	96.1	98.1	99.3	99.6	99.7	100.2	101.6	na	97.7
2010-11	96.5	99.2	101.6	99.1	98.1	na	99.1	na	97.9
Indigenous community housing									
2008-09	90.4	94.1	115.8	64.2	60.3	..	100.0	115.6	96.3
2009-10	90.3	92.3	83.5	84.7	na	97.0	na	93.6	88.1
2010-11	100.7	100.1	93.0	88.7	na	98.2	na	71.2	94.9

Note: .. means not applicable.

Note: na not available.

Source: Productivity Commission, *Report on Government Services 2013*, Table 16.6.

- 45 Rent collection rates for community housing are generally lower than those for public housing. Indigenous community housing rent collection rates are lower than for mainstream community housing, although the data are volatile. It is expected, however, that both rent collection rates and rents charged will increase for Indigenous community housing. One of the expected outcomes of the National Partnership Agreement on Remote Indigenous Housing is ICHO rent reforms, leading to fair rent setting in line with that applying to public housing — meaning generally

⁵³ SOMIH type housing in the Northern Territory and the ACT are part of mainstream public housing. Victoria and Western Australia have recently moved SOMIH with mainstream public housing.

rent is set at a proportion of assessable income for a household — and regular collection of the new rents.

- 46 In any case, any difference between rent collection rates by Indigeneity should be captured by an assessment of rents paid.
- 47 **Revenue factor.** A revenue factor was calculated using the SDC factor adjusted to reflect the relative rents paid disaggregated by income, Indigeneity and location (paragraph 32). The Indigenous cost weight was not applied. Table 15-12 shows the resulting factors.

Table 15-12 Revenue factor

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Revenue factors	1.019	0.939	1.018	0.973	1.077	0.928	0.739	1.828	1.000

Source: Staff estimates.

- 48 These factors are highly material, especially for the Northern Territory. While they recognise the same drivers as the proposed expense assessment and it would be possible to calibrate them to ensure a net assessment achieved the same results as separate revenue and expense assessments, staff consider separate assessments will be easier to explain.

Staff propose to recommend the commission:

- assess housing revenue on the basis of assessed numbers of households adjusted to recognise differences in rents paid by Indigeneity, income and location
- assess housing on a gross expense and revenue basis rather than net.

Assessment of capital needs for housing

- 49 Staff consider that the SDC factor developed for gross housing expenses should be used to assess housing stocks for the investment and depreciation assessments. Just as differences in use of social housing by different population groups disaggregated on the basis of their income, Indigenous and location status influence maintenance and management expenses, the relative proportions of these groups in State populations will influence the numbers of social housing dwellings required in each State. This will determine the assessed depreciation expenses, and population growth and changes in the relative proportions of these population groups will determine assessed investment for each State.
- 50 The SDC factor also includes an Indigenous cost weight to reflect extra management and maintenance costs of housing occupied by Indigenous tenants compared to the

costs of housing occupied by non-Indigenous tenants. To include this weight in the capital assessments, States would need to provide evidence that houses for Indigenous tenants cost more to build (they are built to a higher standard) or are replaced more frequently.

- 51 The impact of location on the cost of providing and depreciating houses will be relevant to the housing investment and depreciation assessments. Western Australia, however, did not consider the recurrent location factors adequately recognise the higher capital costs of providing housing in remote areas, especially where the mining industry has placed additional pressures on the cost of providing housing, including for its employees. We note the data it provided on higher rents in remote areas and its expenditure on affordable housing for its employees. However, we would prefer data on the relative cost of building social housing in different locations as evidence of differences in the costs faced by States. In addition, as we understand it, expenses on employee housing are classified to functional categories in the ABS Government Finance Statistics (on the basis of the Government Finance Classification) and not to this category.
- 52 A general review of appropriate measures of these disabilities is being undertaken. This is reported in the Investment chapter. At this stage, staff do not have sufficient evidence to justify the use of housing specific location factors.

Staff propose to recommend the commission:

- use the SDC factor to estimate assessed capital housing stocks and depreciation expenses
- exclude the Indigenous cost weight unless States can provide evidence that houses aimed at Indigenous tenants are built to a higher standard or replaced more frequently
- apply the same location cost disabilities to housing investment and depreciation expenses as those applied to other expenses included in the investment and depreciation categories unless there is evidence these are inappropriate.

Remote Indigenous Housing National Partnership Payment (NPP)

- 53 The Remote Indigenous Housing NPP currently does not impact on relativities.
- 54 Under the NPP, the Australian Government committed to spend about \$4.5 billion over 10 years from 2008-09. The NPP aimed to:
 - reduce significantly severe overcrowding in remote Indigenous communities
 - increase the supply of new houses and improve the condition of existing houses in remote Indigenous communities
 - ensure that rental houses are well maintained and managed in remote Indigenous communities.

- 55 In the 2010 Review, the commission decided that the NPP should not impact on the relativities because these payments funded improvements to assets not owned by State governments. These assets were mainly owned by ICHOs.
- 56 The National Partnership Agreement on Remote Indigenous Housing expects State housing authorities to become the major deliverer of housing for Indigenous people in remote areas of Australia. That process required the transfer of responsibility for ICHOs to State governments.
- 57 What seems to be happening is that most jurisdictions have chosen to bring their ICHOs into their State frameworks through a process of accreditation and registration, thereby ensuring that they are meeting appropriate performance standards and implementing rent reforms.⁵⁴ The Northern Territory has chosen to bring its remote housing within its public housing system. It has taken over the funding and management of about 4 000 dwellings. However, it is not clear whether the ownership has been transferred to the State government. Table 15-13 shows the number of permanent dwellings managed by currently funded or actively registered ICHOs as at June 2008 and June 2011.

Table 15-13 Number of permanent dwellings managed by funded/actively registered ICHOs, at 30 June 2008 and 2011

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
	No.	No.	No.	No.	No.	No.	No.	No.
June 2008	2 510	348(a)	4 092(a)	2 200	895	..(a)	23	6 326
June 2011	2 445	1 915	4 504	2 414	920	59	24	2 043

Note: .. means not known

(a) The Australian Government collected data from Victoria, Queensland, and Tasmania that could not be apportioned to those States.

Source: Productivity Commission, *Report on Government Services, 2013*, Table 16A.8.

- 58 As noted above, these payments were treated in the 2010 Review as having no impact on the relativities because they were considered to be funding improvements to assets not presently owned by State governments. While the ICHO houses are being transferred to State responsibility, it would appear that their ownership will not transfer to State governments. Therefore, staff are of the view that the payments should continue to be treated as having 'no impact'.
- 59 An implication of this is that we should not include, therefore, ICHO users in the assessment of housing capital needs.

⁵⁴ Department of Families, Housing, Community Services and Indigenous Affairs, *National Partnership on Remote Indigenous Housing – Progress Review (2008-2013)*.

State views are sought on:

- whether the Remote Indigenous housing NPP should have an impact on the housing assessment.

First Home Owners Scheme (FHOS)

- 60 Three types of State assistance to first home buyers are currently recognised in the commission's assessments.
- First Home Owner Scheme (FHOS) - in the 2010 Review, the commission assessed FHOS expenses on an actual per capita (APC) basis because all States had largely the same policy.
 - Other State specific first home bonuses— these expenses were offset against revenue from stamp duty on conveyances because there were no common State policies.
 - Exemptions / concessions on stamp duties on conveyances – these reduced States' actual revenue from stamp duty on conveyances.
- 61 The 2008 Intergovernmental Agreement gave States the capacity to apply caps to the eligibility for FHOS grants from July 2009. As a result, States have modified the eligibility and caps for FHOS grants and the new arrangements are mainly becoming effective in 2012-13. States are also consolidating their FHOS and other bonus grants.
- 62 The changes to FHOS mean that State arrangements are sufficiently different that they invalidate the current APC assessment. Therefore, we think that continuing the 2010 Review assessment is neither an option for the 2015 Review or for the last year of the 2014 Update.
- 63 Staff consider that the different types of assistance to first home buyers should be assessed on a consistent basis, and that needs exist and should be recognised. Therefore, our preferred option would be:
- to assess all State expenses on first home type grants using the proportions of States' actual numbers of first home buyers
 - to seek from States the amounts of the tax expenditure on exemptions and concessions, add them back to States' stamp duty on conveyances revenues, and assess the tax expenditure in combination with first home type grant expenses.
- 64 In its submission to the 2014 Update, Western Australia noted that data on the number of first home buyers in each State, stratified by those looking to buy an established home and those looking to buy a new home would not be available on a comparable basis due to the differing cap limits across the States. Because of this, the assessment might be policy influenced and a discount may be appropriate.

- 65 However, it is not clear at this stage that this assessment would be material. Using the proposed \$30 per capita materiality threshold for disabilities, the current FHOS assessment is not material, as shown in Table 15-14.

Table 15-14 FHOS expenses, GST redistribution, 2013 Update

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
Dollars million	4.6	12.5	-28.6	20.4	-9.6	-4.2	6.3	-1.6	43.9
\$pc	0.62	2.17	-6.09	8.07	-5.72	-8.15	16.49	-6.60	1.89

Source: Commission estimates.

- 66 In 2011-12, States spent about \$800 million on FHOS and about \$160 million on other first home bonus schemes. At this stage, we do not know how much States will be spending under their new arrangements, nor do we know the amounts of the tax expenditure. The likelihood is that the proposed assessment would not be material, especially if a discount is applied. In that case an EPC assessment would be implemented.

Staff propose to recommend the commission:

- assess all State expenses on first home type grants using the States' actual numbers of first home buyers
- seek from States the numbers of first home buyers
- seek from States the amounts of the tax expenditure on the exemptions and concessions, add them back to States' stamp duty revenues, and assess the tax expenditure combined with all other first home grant expenses
- test the materiality of the proposed assessment and implement it, with a possible discount, if it is material. Otherwise an EPC assessment would be implemented.

PROPOSED CATEGORY STRUCTURE

- 67 Staff propose the following assessment structure for this category in the next review.
- 68 Investment and depreciation expenses will be assessed in the Investment and Depreciation categories, respectively. We propose to use the SDC factor, excluding the Indigenous cost weight, to estimate assessed capital housing stocks and depreciation expenses.

Table 15-15 Proposed Housing category structure

Component	Disability	Influence measured by disability
Gross service expenses	SDC	Recognises that income, Indigeneity and location affect the use and cost of providing housing services.
	Location	Recognises the differences in the cost of providing labour resources between States and to different areas within a State.
Other expenses	Administrative scale	Recognises the unavoidable costs each State incurs to provide the policy and administrative infrastructure necessary to provide the minimum unavoidable service, regardless of the size of the task.
	First Home Owners Scheme	Recognises the differences in the costs of the First Home Owners Scheme, and other similar State schemes.
	Native title and land rights	Recognises State costs of settling native title and land rights claims made under Australian Government legislation.
	Remote Indigenous Housing NPP	Recognises the differences between States in the distribution of the Australian Government's Remote Indigenous Housing NPP.
Revenue	SDC, without Indigenous cost weight	Recognises that income, Indigeneity and location affect the number of households paying rent and the ability of States to raise revenue from their different social housing populations.

CHAPTER 16 – SERVICES TO COMMUNITIES

2010 REVIEW APPROACH

- 1 The Services to communities category included expenses on essential and support services that States generally provide to their communities.
- 2 The assessment recognised 6 different types of expenses.
 - **Water and wastewater subsidies.** The assessment recognised that States on average provide subsidies to water providers in small communities and in areas of poor water availability and/ or quality. The share of a State's population residing in urban centres – localities (UCLs) with populations between 200 and 1000 people in areas of poor water availability and/or quality was used as an indicator of differential needs across States.
 - **Electricity subsidies.** The assessment recognised that States with larger shares of the population living in remote and very remote areas had greater subsidy requirements because this was where States tend to subsidise providers.
 - **Water and electricity concessions.** The assessment recognised that States with larger shares of Commonwealth pensioner concession card or health care concession card holders had to spend more on concessions.
 - **Community development expenses.** This assessment recognised that States spend more on community development if they have a larger share of the population living in discrete Indigenous communities. These communities require more administrative and essential service support.
 - **Community amenities expenses.** These were assessed on an equal per capita basis because there was no common policy across States.
 - **Protection of the environment expenses.** These were assessed so that each State receives its population share of the expenses. The range of expenses included was particularly diverse and no drivers other than population could be established.

ISSUES AND ANALYSIS

- 3 The main issues relating to this assessment are:
 - water and sanitation subsidies assessment:
 - State average policy in the provision of water services
 - implications of new data for the water subsidy assessment
 - electricity subsidies assessment:
 - State average policy in the provision of electricity services

- the appropriate measure of electricity subsidy needs
 - simplification of the assessment – merging of the water and electricity subsidy assessments and moving the concessions assessment to the welfare category
 - a new measure of the discrete Indigenous community population for the community development assessment
 - recognising the impact of the mining industry on State expenses on community development and community amenities.
- 4 These issues have arisen because:
- the increasing emphasis on cost recovery for water and electricity providers has required staff to reconsider average policy
 - the new financial and service delivery data collected on water subsidies through the Data Working Party⁵⁵ do not support the recognition of water quality and availability or other influences in the water assessment
 - the measure of the population in discrete Indigenous communities used in the 2010 Review is no longer available and
 - Western Australia has argued we do not adequately recognise the impact of the mining industry on services in this category.

Water and sanitation subsidies

- 5 **What States do.** Table 16-1 shows State subsidies on water and wastewater services, as provided by States for the 2013 Update. While the data New South Wales provided show virtually no subsidies, under the Country Towns Water Supply and Sewerage Program, it contributed \$85 million in capital grants to water supply and sewerage projects in 2011-12⁵⁶. All States but the ACT provide subsidies.

⁵⁵ Financial and service delivery information on water and wastewater services were collected from Western Australia, Queensland, South Australia, and the Northern Territory. Western Australia was able to provide comprehensive data at the community level. Queensland was able to provide limited data, while South Australia could only provide data for its 5 administrative regions. The ACT supported the use of these data if they are reliable and fit-for-purpose.

⁵⁶ New South Wales has not classified this payment as a water subsidy to service provider in its data return to the commission. Source: <http://www.water.nsw.gov.au/Urban-water/Country-town-water/default.aspx>.

Table 16-1 State subsidies on water and wastewater services

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
2006-07	13	29	500	277	140	0	0	30	989
2007-08	8	12	292	306	151	0	0	38	807
2008-09	2	11	242	347	167	6	0	49	823
2009-10	18	5	330	399	174	7	0	32	965
2010-11	6	5	137	372	161	14	0	47	742
2011-12	3	5	87	351	129	7	0	56	638
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
2006-07	1.97	5.70	124.06	132.78	89.51	0.00	0.00	138.30	48.06
2007-08	1.14	2.39	70.40	142.49	96.09	0.00	0.00	175.80	38.50
2008-09	0.33	2.08	56.80	156.59	104.37	11.36	0.00	217.09	38.41
2009-10	2.48	0.85	75.78	175.67	107.83	13.64	0.00	141.24	44.20
2010-11	0.88	0.86	30.92	160.48	98.70	26.49	0.00	205.56	33.51
2011-12	0.46	0.83	19.32	147.12	78.11	12.90	0.00	242.29	28.36

Source: State data provided for the 2013 Update.

- 6 Victoria provides limited and decreasing levels of subsidy to service providers. The subsidies in Tasmania support the reform of Tasmania's water and wastewater sector.
- 7 Queensland, Western Australia, South Australia and the Northern Territory provide substantial subsidies. Subsidies in Queensland have been decreasing as the State is moving towards greater cost recovery and phasing out the subsidy to its desalination plant.
- 8 Larger subsidies appear to be directed to smaller communities. Some States provide subsidies to larger centres either for specific purposes, such as Queensland, or to subsidise uniform tariffs (Western Australia, South Australia and the Northern Territory).
 - Table 16-2 shows per capita operating expenses for Queensland's communities. Queensland did not provide comprehensive subsidy information. It shows higher operating expenses in smaller communities.
 - Table 16-3 shows Western Australia's per capita subsidy (operating and capital) and expense data by community size. Western Australia provides subsidies to all communities, including Perth. It too shows much greater per capita subsidies and expenses in smaller communities than in large ones.

- Table 16-4 shows expenses and subsidies for the 5 administrative regions of South Australia. It shows a small per capita subsidy for Adelaide but increasing per capita subsidies as population size falls.
- Table 16-5 shows data on per capita operating expenses and subsidies for 5 selected Northern Territory communities of different sizes, ranging from around 150 people (Pigeon Hole) to around 2 500 people (Wadeye). These communities were selected by the Northern Territory as being representative of communities of similar size. The data from the Northern Territory show that per capita operating expenses and subsidies increase as community population decreases.

Table 16-2 Operating expenses, Queensland, average of 2008-09 to 2010-11

	Operating expenses
	\$pc
Less than 1 000	399
1 000 to 9 999	480
10 000 and over	111
Total	115

Source: CGC special data collection, 2013.

Table 16-3 Expenses and subsidies, Western Australia, 2011-12

	Subsidies	Operating expenses
	\$pc	\$pc
Less than 1 000	1 630	1 910
1 000 to 9 999	516	765
10 000 and over	42	241

Source: CGC special data collection, 2013.

Table 16-4 Operating expenses and subsidies, South Australia, 2011-12

	Population	Subsidies	Operating expenses
	no.	\$pc	\$pc
Metro	1 182 788	7	245
Outer Metro	165 266	153	695
North	122 513	197	1 017
South East	56 721	256	459
Eyre	29 588	1 427	1 681
Total	1 556 876	74	388

Source: CGC special data collection, 2013.

Table 16-5 Operating expenses and subsidies, Northern Territory, average 2008-09 to 2011-12

	Population	Subsidies	Operating expenses
	no.	\$pc	\$pc
Wadeye	2 461	409	450
Angurugu	963	622	662
Hermannsburg	725	733	490
Milyakburra	201	1 611	1 572
Pigeon Hole	145	1 161	1 166

Source: CGC special data collection, 2013.

- 9 **What is average policy?** The National Water Commission expects providers to generally cost recover in metropolitan, rural and regional areas but recognises that providers in small communities will often need to rely on Community Service Obligations because they cannot provide water services in an economically viable manner.
- 10 The information provided to us suggests that some part of State subsidies, at least in some States, are provided to all users, but that the subsidy per user is higher in smaller communities. These subsidies are either in direct recognition of higher costs or part of uniform tariff policies. There are also subsidies for special projects like desalination plants.
- 11 Conceptually, we propose to treat State subsidies as falling into three areas.
 - a subsidy paid to all residents
 - a subsidy offsetting higher than average costs in small communities and
 - a subsidy for special projects.
- 12 The first class of subsidy is provided to all residents and should be assessed equal per capita (EPC). Because it would be difficult to identify this class separately from other subsidies to small communities, we propose to identify the total subsidy paid to residents in large centres, derive an average per capita amount and estimate a total amount of subsidies by applying the average per capita subsidy to all communities. The estimated subsidies would be assessed EPC. Staff will need to collect this information from States.
- 13 Similarly we propose to assess expenses on special projects EPC as that reflects unique State policy.
- 14 A conservative estimate of these subsidies paid to communities with population over 10 000 based on National Water Commission data and State data suggest an amount of about \$130 million.

- 15 Lastly, we propose to assess the balance of recorded State expenditure on the basis of disabilities States face in providing water services to small communities.
- 16 **Influences on the needs for subsidies in small centres.** In response to Western Australia's submission, we have used the recently collected data to analyse the impact of the following influences:
 - water quality and availability
 - remoteness and
 - proximity of main water sources.
- 17 In the past, States have argued that they cannot cost recover in Indigenous communities partly because of the inability of the users to pay. In 2011-12, 89% of the Northern Territory's \$56 million subsidies for water and wastewater services were for Indigenous communities. The data provided by States did not enable us to compare expenses and subsidies in Indigenous and non-Indigenous communities. As a result, staff do not consider we can take this influence into account unless there is more supporting data.
- 18 We have however, made some progress on identifying the population living in centres of less than 200. This is explained below.
- 19 *Water availability and quality.* Most of the information readily available about water availability and quality in Australia covers broad geographical areas. It is difficult to link water quality and availability to individual communities. It would be even more difficult to measure the impact of water quality and availability on the cost of providing water services. In the last review, water availability and quality in most areas of Australia was classified as poor. Only the water in the far north and in Tasmania was rated as adequate.
- 20 The 2010 Review assessment was based on limited evidence that costs were higher in areas of poor water and that subsidies were required because providers could not cost recover.
- 21 However, while water availability and quality in all areas of New South Wales and Victoria were classified as poor, providers mostly cost recovered. Queensland is moving towards cost recovery but its water availability and quality is not changing, as far as we are aware.
- 22 Table 16-6 provides expenses and subsidies by water availability and quality based on data provided by Western Australia. Per capita expenses and subsidies are generally higher where water is adequate. The exception is communities between 1 000 and 9 999, where per capita subsidies are lower in areas of adequate water.
- 23 We used the 2010 Review information on water quality and availability to split the Western Australian communities between poor and adequate water quality and availability. There is only one community (Wyndham) with a population less than

1 000 and adequate water in the dataset provided by Western Australia. The numbers for Wyndham may reflect its own circumstances rather than the impact of water availability and quality.

- 24 These results may be a reflection of the small size of the dataset and/or the quality of the data.

Table 16-6 Expenses and subsidies by water quality and availability, Western Australia

	Expenses		Subsidies	
	Adequate	Poor	Adequate	Poor
	\$pc	\$pc	\$pc	\$pc
Less than 1 000	4 711(a)	1 800	3 890	1 542
1 000 to 9 999	765	764	224	339
10 000 and over	631	238	121	41
Total	817	281	513	83

(a) Wyndham is the only community with a population less than 1 000 and adequate water.

Source: CGC special data collection, 2013.

- 25 Table 16-7 compares per capita expenses by community size and water quality and availability in Queensland. It shows that, in communities with a population less than 1 000 or over 10 000, per capita expenses are greater in communities with poor water compared with those with adequate water. It is the reverse for communities with populations between 1 000 and 9 999.

Table 16-7 Expenses by water quality and availability, Queensland

	Adequate	Poor
	\$pc	\$pc
Less than 1 000	288	666
1 000 to 9 999	820	276
10 000 and over	54(a)	111
Total	394	112

(a) Mount Isa is the only community with a population over 10 000 with adequate water.

Source: CGC special data collection, 2013.

- 26 The information presented above does not help the case that poor water availability and quality increase the need for government subsidies. It may be that our measures of water availability and quality are too broad or simple for the complexity of the issues, that the financial data are not sufficiently reliable or that the sample size is too small.

- 27 Considering the lack of evidence and reliable and detailed data on the impact of water availability and quality on the need for subsidies, staff propose not to take water availability and quality into account in the assessment in the next review.
- 28 *Remoteness.* Table 16-8 shows per capita expenses and subsidies by community size and remoteness for Western Australia. While operating expenses are higher in remote areas for each community size, this is not always the case for subsidies. However, when all communities are included, expenses and subsidies are significantly higher in remote areas.

Table 16-8 Expenses and subsidies by remoteness, Western Australia

	Expenses		Subsidies	
	Remote	Non-remote	Remote	Non-remote
	\$pc	\$pc	\$pc	\$pc
Less than 1 000	2 476	1 463	1 742	1 542
1 000 to 9 999	978	673	322	599
10 000 and over	562	230	174	38
Total	890	256	383	70

(a) Wyndham is only one community with population less than 1 000 and adequate water.
Source: CGC special data collection, 2013.

- 29 Table 16-4, in the previous section, shows that the more remote areas of South Australia receive greater subsidies.
- 30 Overall, staff consider more remote communities are likely to require higher subsidies than non-remote ones.
- 31 *Distance from water source and source of water.* Western Australia also provided data to calculate per capita expenses and subsidies by distance of a community from its water source and by source of water (surface and ground). The results were mixed. They did not provide evidence one way or the other that increasing distance from water source increased subsidies or that ground water was more costly to provide and required higher subsidies.
- 32 The other States were not able to assist. While we have been able to obtain data from Geoscience Australia on distance of water sources from urban centres in other States, we have not been able to relate that data to subsidy size or operating costs.
- 33 Staff do not consider we can take this influence into account.
- 34 *Community size.* The data provided by Western Australia and Queensland show that reticulated water services are provided to communities with populations well below 200.

- 35 The ABS has no standard classifications for communities with populations less than 200. However, staff have developed a method for identifying communities with populations below 200 in remote and very remote regions of Australia based on ABS mesh blocks⁵⁷. The main criterion for identifying these communities was for them to have a population density of 100 persons per square kilometre, which is consistent with the ABS' approach for Urban Centres – Localities (UCLs) with populations greater than 200.
- 36 Table 16-9 below shows the population residing in remote and very remote communities of 50 to 200 persons and 200 to 1 000 persons (using the ABS definition of UCL). Including communities with populations between 50 and 200 is only material for the Northern Territory.

Table 16-9 Population in small communities in remote and very remote regions

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	persons	persons	persons	persons	persons	persons	persons	persons	persons
Communities 50-200 (CGC)	1 011	169	2 795	2 656	1 603	226	0	160	8 620
Communities 200-1000 (ABS)	4 958	1 515	27 522	26 022	12 457	4 381	0	23 051	99 906
Total	5 969	1 684	30 317	28 678	14 060	4 607	0	23 211	108 526

Source: Staff calculations using ABS population data.

Staff propose to recommend the commission:

- assess State subsidies due to uniform tariff policies and special projects EPC
- assess needs for the remaining subsidies to uneconomic providers using the population living in communities with population from 50 to 1 000 in remote and very remote areas
- no longer recognise that water availability and quality have an impact on water subsidies.

Electricity subsidies

- 37 Table 16-11 shows State subsidies on electricity services, as provided by States for the 2013 Update. The majority of the subsidies are provided by Queensland, Western Australia and the Northern Territory.

⁵⁷ Mesh blocks are the smallest geographic region in the Australian Statistical Geography Standard and the smallest geographical unit for which Census data are available. In 2011, there were about 347 000 mesh blocks covering the whole of Australia without gaps or overlaps.

Table 16-10 State expenses on electricity services

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
2006-07	0	2	315	81	9	7	0	101	514
2007-08	0	3	585	86	7	7	0	159	848
2008-09	0	4	446	95	7	8	0	187	747
2009-10	0	3	252	310	8	7	0	140	719
2010-11	0	2	399	477	11	7	0	125	1 022
2011-12	0	1	415	551	16	8	0	129	1 120
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
2006-07	0.00	0.37	78.19	38.84	5.83	13.45	0.00	472.09	25.02
2007-08	0.00	0.60	141.37	40.08	4.70	13.84	0.00	729.35	40.45
2008-09	0.00	0.70	104.69	42.68	4.61	16.45	0.00	834.42	34.85
2009-10	0.00	0.54	57.70	136.57	4.72	13.65	0.00	612.04	32.93
2010-11	0.00	0.38	90.05	205.38	6.86	14.53	0.00	543.23	46.13
2011-12	0.00	0.11	92.00	230.84	9.67	16.03	0.00	553.63	49.80

Source: State data provided for the 2013 Update.

38 In the last review, the commission concluded that:

- States did not provide subsidies to electricity providers on interconnected networks; these cost recovered
- the proportion of the State population residing in remote and very remote areas provided a good proxy for State electricity subsidy needs because most communities in these regions were not connected to main transmission networks. The measure had the additional benefit of being policy neutral.

39 For the 2015 Review, we have re-examined what States do and reconsidered how subsidy needs might be measured.

40 **What States do.** Australia has a National Electricity Market (NEM) – which comprises New South Wales, Victoria, Queensland, South Australia, Tasmania and the ACT. However, not all areas of Queensland, South Australia and Tasmania are part of the NEM. Communities in these ‘off-grid’ areas are serviced by isolated generators.

41 In Western Australia, around 1 million premises in Perth and surrounding communities are connected to the South West Interconnected System (SWIS) and around 43 000 premises in the Pilbara region are connected to the North-West Interconnected System (NWIS). There are smaller networks and isolated generators across the rest of the State.

- 42 In the Northern Territory, there is a total customer base of around 80 000 connections. These are serviced by three small networks and smaller isolated generators. The three networks are:
- the Darwin to Katherine interconnected system (DKIS)
 - Alice Springs
 - Tennant Creek.
- 43 **What States do on average.** States appear to provide:
- a subsidy to all residents and
 - a subsidy to fund the provision of services in small communities with stand-alone generators where cost recovery cannot be achieved.
- 44 The first class of subsidy is provided to all residents and should be assessed EPC. Because it would be difficult to identify this class separately from other subsidies to small communities, we propose to identify the total subsidy paid to residents in large centres, derive an average per capita amount and estimate a total amount of subsidies by applying the average per capita subsidy to all communities. The estimated subsidies would be assessed EPC. Staff will need to collect this information from States.
- 45 The second type of subsidy is the result of diseconomies of small scale and is what needs were assessed for in the last review. We think this assessment should be retained but how it is measured should be reconsidered.
- 46 **Measuring the diseconomies of small scale disability.** Recent research shows that the population in remote and very remote areas may overestimate the population not supplied by interconnected networks and that require subsidies. This is because considerable remote and very remote areas in some States are serviced by interconnected networks and subsidies are not provided to stand alone farming properties outside urban centres or large communities.
- 47 Table 16-11 shows:
- the population living in communities in remote and very remote regions – the measure of needs used in the 2010 Review
 - the population in remote and very remote regions living in communities (UCLs) of 200 people and more (excluding those living in isolated farms and stations)
 - the population in remote and very remote regions living in communities (UCLs) of 50 to 1000 people (the population staff recommend for the water subsidy assessment)
 - the estimated population outside the NEM, SWIS, NWIS and DKIS
 - State subsidies in 2011-12.

- 48 While the estimated population outside the grids probably is the closest to the numbers of people likely to be supplied by subsidised providers, it is likely to be policy influenced. An advantage of using population in remote and very remote areas is that it is policy neutral. We could improve on the current method by using the population in remote and very remote regions living in communities (UCLs), and excluding those living in isolated farms and stations because they would rely on their own electricity production. We could also exclude those living in large centres as these are likely to be connected to grids. For consistency with the water subsidy assessment, we could use the population in remote and very remote areas living in communities of between 50 to 1000 people.
- 49 Staff consider that it is better to retain a policy neutral measure.

Staff propose to recommend the commission:

- assess subsidies to metropolitan regions and to maintain uniform tariffs EPC
- assess subsidies to uneconomic providers using the proportion of the population living in communities with a population between 50 and 1 000 in remote and very remote regions as this is likely to provide the best policy neutral measure of the population not on the grid.

Table 16-11 Populations measures and State subsidies

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Population									
Remote and very remote ('000)	78.1	5.3	144.7	156.3	39.9	2.6	0.0	87.4	514.3
Remote and very remote communities over 200 ('000)	50.4	2.2	96.7	118.1	21.3	0.7	0	69.3	358.7
Remote and very remote communities between 50-1000 ('000)	6.0	1.7	30.3	28.7	14.1	4.6	0	23.2	108.5
Outside NEM, SWIS, NWIS and DKIS ('000)	0.0	0.0	25.4	91.0	5.1	2.6	0.0	66.0	190.3
Subsidies (\$m)	0.0	0.6	415.2	551.1	15.9	8.2	0.0	128.6	1 119.7
Population shares									
Remote and very remote (%)	15.2	1.0	28.1	30.4	7.8	0.5	0.0	17.0	100.0
Remote and very remote communities over 200 (%)	14.1	0.6	27.0	32.9	5.9	0.2	0.0	19.3	100.0
Remote and very remote communities between 50-1000 (%)	5.5	1.6	27.9	26.4	13.0	4.2	0.0	21.4	100.0
Outside NEM, SWIS, NWIS and DKIS (%)	0.0	0.0	13.3	47.8	2.7	1.4	0.0	34.7	100.0
Subsidies (%)	0.0	0.1	37.1	49.2	1.4	0.7	0.0	11.5	100.0

Source: 2011-12, ABS 2011 Census.

Simplification

- 50 **Combining the water and electricity subsidy assessments.** As staff are now proposing similar assessments for the water and electricity subsidies, it makes sense to combine them.

Staff propose to recommend the commission:

- combine the water and electricity subsidies assessments into one assessment with two parts because they have the same assessment methods
- rename the assessment Utilities subsidies assessment.

- 51 **Concessions.** Based on the 2013 Update results, the water and electricity concessions assessment is not material at the \$30 per capita materiality threshold. Because other income supplements and concessions are included in the Welfare category, staff propose to reallocate State concession expenses on water and electricity subsidies to that category. The nature of the assessment is considered in the Welfare chapter.

Staff propose to recommend that the commission:

- reallocate State concession expenses on water and electricity subsidies to the Welfare category.

Measuring the discrete Indigenous community population

52 While staff propose to retain the community development assessment, an issue for the 2014 Update and the 2015 Review is the quantification of the population in discrete Indigenous communities. Our current definition of these communities was based on 2006 Census and ABS Community Housing and Infrastructure Needs Survey (CHINS) information. Under that definition, a community is classified as ‘discrete Indigenous’ if it meets one or more of the following criteria:

- it is included in the CHINS survey
- it is issued with special Indigenous Census forms, or
- more than 50% of the community’s population is Indigenous.

53 In addition, for the 2011 Census, the ABS has made substantial modifications to its geographical classification.

54 We will need to decide on a new definition of discrete Indigenous community in the 2014 Update because another CHINS survey will not be conducted and the ABS is releasing its 2011 Census geographical level data this year. This issue has been raised in the New issues discussion paper. We would expect that the definition adopted for the 2014 Update would be applicable to the 2015 Review assessments.

Staff propose to recommend the commission:

- note that the definition of discrete Indigenous community needs to be revised to reflect the new census information and the discontinuation of CHINS. This will be done for the 2014 Update.

Impact of mining industry

55 **State views.** Western Australia said the commission’s assessments do not recognise needs for Western Australia to fund community amenities that are driven by economic and population growth. It said the uncertainty of this growth makes the private sector less willing to invest, requiring the State to spend more. Western Australia noted that all States provide support for community amenities, and Western Australia’s Royalties for Regions program includes a substantial component of this type of spending. It said a major driver of this type of spending was the need to support the growth of balanced and sustainable communities. Examples of the types of expenses incurred in Western Australia include housing for workers and support for local government services and infrastructure.

- 56 Queensland said part of the additional expenses faced by State with mining industries is due to more comprehensive regulatory regimes required to protect and support communities which were not necessary in other States.
- 57 **Analysis.** Staff think the types of expenses described by Western Australia and Queensland may be recorded as community development and community amenities expenses, and included in this category. Box 1 provides relevant details.

Box 1 - Expenses in this category

Community development expenses include spending on the planning of new or rehabilitated communities to improve quality of life, including on plans involving housing and industries; facilities for health, education, culture and recreation; schemes for financing construction, regulations on land use, zoning, building standards, administration of concessions to decentralised industries and dissemination of information.

Other Community amenities expenses mainly relate to local government services such as the provision and operation of street lighting, public conveniences, pedestrian shopping malls and drinking fountains. ABS data suggest States do not spend a lot on these services but that Western Australia's spending appears to be much higher in 2011-12 than in previous years.

Source: ABS Government Finance Statistics (GFS), Government Purpose Classification.

- 58 Currently the community development assessment recognises only the higher levels of expenses incurred in discrete Indigenous communities and higher costs because of differences in interstate and regional location influences. Other community amenities expenses are assessed equal per capita, although the effect of differences in interstate location influences are recognised. Therefore, if the mining States have higher levels of need in these areas because of less support from the private sector or the need for more complex arrangements, the existing assessments do not recognise it.
- 59 Staff propose to examine the practicality and materiality of making an assessment for these expenses. However, identifying the relevant expenses in this category which are affected will not be easy and it is not clear how the relevant drivers might be measured.
- 60 A data request has been sent to the States requesting data on the how much they spend on regulatory and administrative expenses associated with public and private infrastructure projects and where they are recorded in GFS. Staff think additional expenses relating to broader community development and additional local government requirements may be included in this category in addition to costs relating to infrastructure. If this is the case, States should advise the nature and amount of these costs and where they are classified in GFS.

- 61 Western Australia has proposed the current interstate wages factor, a State specific regional location factor designed to reflect risk (lower private sector support) and a potential population growth factor be used in an assessment. Staff note the following:
- Differences in interstate wage levels and regional cost allowances (including a State specific regional cost allowance for Western Australia) will be recognised in the Community development assessment and differences in interstate wage levels will be recognised in the Community amenities assessment.
 - History suggests that mining communities receive more rather than less private sector support. We cannot see that a special regional location factor is justified, although there may be a case for recognising the impact of regional cost differences on Other community amenity expenses.
 - We consider **actual** population growth in **relevant** communities would be more appropriate than what Western Australia is proposing because:
 - actual growth is a better indicator of existing need rather than future needs and
 - growth in many centres, such as the capital city, is unlikely to be related to community development and amenities expenses.
- 62 Growth in mining investment, although lagged, might be an alternative indicator of need for such expenses. It could capture the additional complexity of the services required. State views on possible assessments are sought.

Staff propose to recommend the commission:

- examine the practicality and materiality of making an assessment of State recurrent spending on mining related expenses included in this category.

PROPOSED CATEGORY STRUCTURE

- 63 Staff propose the following assessment structure for this category in the next review.

Table 16-12 Proposed Services to communities category structure

Component	Disability	Influence measured by disability
Protection of the environment	Location	Recognises the differences in the cost of providing labour and non-labour resources between States.
Utilities subsidies	Metropolitan subsidies and uniform tariffs	This is an EPC assessment because an assessment of these subsidies is not material.
	Small communities	Recognises the cost of providing electricity, water and wastewater services to small communities in remote and very remote regions.
	Location	Recognises the differences in the cost of providing labour and non-labour resources between States and to different areas within a State.
Community development	Community development	Recognises the higher cost of providing community development services in discrete Indigenous communities.
	Location	Recognises the differences in the cost of providing labour and non-labour resources between States and to different areas within a State.
Community amenities	Community amenities	This is an EPC assessment to recognise that there is no common policy across States.
	Location	Recognises the differences in the cost of providing labour and non-labour resources between States.
Other expenses	Administrative scale	Recognises the unavoidable costs each State incurs to provide the policy and administrative infrastructure necessary to provide the minimum unavoidable service, regardless of the size of the task.
	Native title and land rights	Recognises State costs of settling native title and land rights claims made under Australian Government legislation.

CHAPTER 17 – JUSTICE SERVICES

2010 REVIEW APPROACH

- 64 The Justice services category includes expenses on police services, law courts and legal services, and prison and corrective services.
- 65 The assessment calculates the amount each State needs to spend to deliver the average level of justice services. For each State, the national per capita average expense on justice services is adjusted for differences between the average and its proportion of people who engage with the justice system more frequently, such as Indigenous people, young males and people from a lower socio-economic status (SES) background. Adjustments are also made for the proportion of people living in sparsely populated areas and rural and remote areas, as well as for administrative overheads and for the ACT's role as the national capital.

ISSUES AND ANALYSIS

- 66 States have raised the following issues for this assessment:
- the 50/50 split of police expenses between community and specialised policing
 - the 25% discount of police custody data used in the assessment of specialised policing

Staff have also considered:

- discounting and/or applying cost weights to the use rates derived from criminal courts data
- applying a cost weight for Indigenous people.

Expense split for community versus specialised policing

- 67 **State views.** Western Australia argued that the 50/50 split of police expenses between community policing and specialised policing should be changed to 25/75.
- 68 In its submission, Western Australia described recent reforms to its police services including centralising its operations, having as many frontline officers as possible and implementing prevention and mitigation programs to target high offending population groups. Western Australia said that while these reforms to police services could be viewed as community policing, they in fact target high offender groups and this type of effort will not show up in the police custody data used by the commission. No other States commented on this issue.

- 69 **Analysis.** In the 2010 Review, the commission split police services into 2 expense areas — community policing and specialised policing. Community policing encompasses the work of general duties officers and traffic police and is provided throughout the State. Specialised policing encompasses the work of more specialised units (such as the major crime squads and forensics) and while provided for the entire State, are usually located in major cities or large regional centres. When a major crime is committed in remote areas, specialised units relocate to those locations for the duration of their investigation.
- 70 Splitting police expenses between community and specialised policing expenses was a difficult issue in the last review. There were contradictory views from States and no national data on which to derive a split. The commission decided to assess half of police expenses on the basis of State population and half on the basis of population adjusted for influences linked to the occurrence of crime.
- 71 Staff have examined recent State budget papers and Police service annual reports to determine if any new information are available on the allocation of police resources to different activities. Staff found that different types of police activities and their level of resourcing varied across States. Where information on types of policing and associated resourcing were available, staff made judgements as to whether the type of policing was specialised or community based. The information suggested that the breakdown between community and specialised types of policing ranged from about 30% / 70% (community / specialised) in Western Australia, to about 70% / 30% (community / specialised) in Tasmania, with an average of 55% community policing versus 45% specialised.
- 72 Table 17-1 shows that in 2010-11, apart from the Northern Territory, police to population ratios are similar across States, ranging from 23.6 per 10 000 population in New South Wales to 31.3 in South Australia. The staffing ratios across States have remained stable over time, with the Northern Territory showing the largest increase.
- 73 Staff infer from the table that States provide a relatively large base level of resources to service the population as a whole, with additional resources being provided in those States with higher Indigenous, low SES and young male proportions in their populations. In other words, we believe State government spending on police forces are not driven by rates of crime directly, but are aimed at providing adequate resources across the State to ensure public safety and to enhance the public's perception of their safety. Even if 75% of police time is spent responding to crime, this may not necessarily translate into materially more police above this base level.

Table 17-1 Operational police staff per 10 000 population by State, 2006-07 to 2010-11

Staffing ratio	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
2006-07	23.3	21.3	24.4	25.7	29.0	27.9	20.8	56.8	24.1
2007-08	23.3	20.7	25.8	26.2	29.7	27.6	21.7	60.3	24.4
2008-09	23.4	20.3	26.1	28.2	30.1	27.8	23.2	65.1	24.7
2009-10	23.2	23.3	29.0	27.8	31.0	27.0	22.3	66.5	26.0
2010-11	23.6	25.3	29.3	28.3	31.3	27.9	23.9	70.3	26.8

Source: Productivity Commission, Report on Government Services 2012, Chapter 6A Policing Services - Attachment Tables 6A.1 to 6A.8. ABS ERP data 2010-11.

- 74 Staff have found no new information that would allow us to recommend a change in the commission's split of police expenses. We would require agreement among the States about what constitutes community policing and information on the level of resources spent on community policing versus specialised for us to recalculate the share of expenses applicable to each.

Staff propose to recommend the commission:

- assess 50% of police expenses on the basis of State population (community policing) and 50% on the basis of population influences linked to the increased occurrence of crime (specialised policing) due to the lack of nationally consistent data on police activity resourcing.

Discount of police custody data

- 75 **State views.** Western Australia said it considers that the 25% discount applied to police custody data used in the assessment of specialised policing expenses should be reduced. It opposes discounting on data quality grounds because it does not necessarily improve equalisation outcomes and it assumes that the data overstates the reality. Western Australia said discounting custody use weights on the grounds that they may not adequately capture differences in the complexity of police investigations may not be justified. It says the greater prevention and mitigation effort linked to minor incidents would arguably put them on par with more serious incidents, such as homicide, abduction or fraud, for which police do not generally enter into mitigation schemes. No other States commented on this issue.
- 76 **Analysis.** The current assessment derives use rates for specialised policing from the 2007 *National Police Custody Draft Survey* conducted by the Australian Institute of Criminology (AIC). In the 2010 Review, uncertainty relating to how well police custody incidents data measured relative police work loads led the commission to apply a 25% discount to use weights. The discount was justified on the following grounds:

- the custody data may not adequately capture differences in the complexity of police investigations
- the data were drawn from a survey of one month
- some police activities do not involve taking people into custody.

- 77 Staff consider that Western Australia's argument about the balance between prevention and mitigation effort and complexity of the crime, without supporting data, is not persuasive enough to warrant a change to the discount. However, data from the AICs new police custody survey, which should be available in early 2014, may provide information on the relative level of resources needed for different types of police investigations. The AIC has told commission staff that the new survey will provide data covering a 12 month period. The survey should also provide information on the rank of the police officer and the time involved for each custody incident. This type of data has the potential to allow estimation of the level of resourcing involved for different types of police custody incidents.
- 78 Staff will examine data from the new AIC survey to determine whether the current data can be updated and if the 25% discount to specialised policing use rates is still warranted.

Staff propose to recommend the commission:

- examine the upcoming AIC police custody survey data to determine whether the current data can be updated and whether a 25% discount of specialised police use rates is still warranted.

Criminal court data

- 79 In the 2010 Review, the commission decided not to apply a discount to use rates derived from ABS criminal courts data (for example, similar to that applied to specialised police services) to make allowances for differences in complexity of charges and level of Indigenous workloads. This was because no data were available on complexity of charges and the level of over-representation of Indigenous people in criminal courts may vary considerably from that observed from police custody data.
- 80 Staff propose to investigate whether the new AIC survey data can be used as a basis for introducing a discount and/or cost weights to criminal court data, bearing in mind that police custody data may not be a reliable representation of criminal courts data.

Staff propose to recommend the commission:

- investigate whether data derived from the AIC survey can be used as a basis for introducing a discount and/or cost weight for criminal court data.

Indigenous cost weights

- 81 In the 2010 Review, the commission did not assess cost weights for Indigeneity because there was insufficient reliable data on which to base the weights. The commission had evidence of the rates of contact of Indigenous people but not their unit costs. The new AIC survey data may provide some indication of the extra costs required for processing Indigenous versus non-Indigenous offenders. Staff propose to investigate whether this data can be used as a basis for introducing Indigenous cost weights.

Staff propose to recommend the commission:

- investigate whether data derived from the new AIC survey can be used as a basis for introducing Indigenous cost weights.

PROPOSED CATEGORY STRUCTURE

- 82 Staff propose the following assessment structure for this category in the next review.

Table 17-2 Proposed Justice services category structure

Component	Disability	Influence measured by disability
Service expenses	SDC	Recognises that certain population characteristics affect the use and cost of providing justice services, for example Indigeneity, males aged 15-34 and people from low SES areas.
	Service delivery scale	Recognises the additional costs of providing services from police stations in sparsely populated areas.
	Location	Recognises the differences in the cost of providing labour and non-labour resources between States and to different areas within a State.
Other expenses	Administrative scale	Recognises the unavoidable costs each State incurs to provide the policy and administrative infrastructure necessary to provide the minimum unavoidable service, regardless of the size of the task.
	National capital	Recognises the costs to the ACT arising because of Canberra's status as the national capital and seat of government.
	Native title and land rights	Recognises State costs of settling native title and land rights claims made under Australian Government legislation.

CHAPTER 18 – ROADS

2010 REVIEW APPROACH

- 83 The Roads category comprised expenses on the maintenance and rehabilitation of roads, bridges and tunnels, as well as recurrent expenses on road safety, traffic management and other transport activities. Roads-specific disabilities included:
- Local roads – measured the costs of maintaining local roads managed by State governments based on the length of minor roads in sparsely settled Census collection districts.
 - Urban roads – measured urban road network length costs (based on urban population) and road use costs in urban areas. Road use costs are split into traffic volume and heavy vehicle use, which are based on traffic volume data from the Bureau of Infrastructure, Transport and Regional Economics (BITRE).
 - Rural roads – measured rural road network length costs (based on a rural road length mapping algorithm), and road traffic volume use and heavy vehicle use costs in rural areas (measured in the same way as urban road use costs). These disabilities include the regional location influence.
 - Bridges and tunnels – measured bridge and tunnel maintenance costs as equal per capita (EPC), as we could not define appropriate expense drivers.
 - Other services – measures other factors that may influence roads costs as EPC.
- 84 The above disabilities were weighted using cost allocation data produced by the National Transport Commission.

ISSUES AND ANALYSIS

- 85 There are 3 main issues relating to the Roads assessment:
- as part of the response to examining mining related expenditure, identifying roads connecting economic centres (for example, mines) that are not currently captured in the synthetic rural road network due to the economic centres not having a population of at least 400 people
 - the effects of physical environment on road maintenance costs
 - whether the data request for State roads spatial data should progress to determine whether this could improve the current synthetic network for rural roads.

Mining related expenditure

- 86 Queensland stated that there are unrecognised road maintenance costs resulting from road networks between mines, associated infrastructure and mining communities that connect localities of less than 400 people (which are therefore not recognised in the rural road length algorithm).
- 87 Staff propose to send a data request to Queensland and Western Australia seeking additional information to determine if there are material unrecognised rural roads (and any associated maintenance costs) that are not being captured by the synthetic road network. If the information provided evidences a case for this, then we will pursue the data request with other States.

Physical environment

- 88 The commission engaged a consultant⁵⁸ in January 2013 to study the impact of physical environment on State government spending. A copy of the consultant's report was sent to the States on 24 July 2013. The report identifies the impacts of State topography, rainfall, temperature, wind, shrink/swell of soil and acid sulphate soil. It also identifies flooding and soil salinity as material characteristics but did not consider them further as there were no nationally consistent data available.
- 89 The report indicates that interstate differences in topography and soil type affect the maintenance costs of roads. Staff are investigating whether additional disabilities should be developed to capture these effects of the physical environment on road maintenance costs.

State views are sought on:

- whether the consultant's report provides a suitable basis for assessing any additional effects of the physical environment on road maintenance costs.

State roads spatial data

- 90 The ACT stated that the commission should progress the data request for State roads spatial data to determine if it can provide a better outcome than the current algorithm approach.
- 91 Tasmania stated that they consider the Roads assessment to have data quality and methodological issues, though did not specify their concerns or indicate it as a priority.
- 92 Staff propose not to pursue the data request for State roads spatial data at this stage, as we anticipate that it would involve a significant time commitment, which may not

⁵⁸ *Optimising GST Allocations*, Pottinger Co Pty Ltd and AECOM, June 2013

be possible in the 2015 Review timeframe. The objective of this exercise was primarily to capture road width in the synthetic rural road network. Staff conducted some initial materiality testing for duplicating lanes on some significant rural roads. After including these additional lengths in our current rural road length calculations, the results indicated that this would be immaterial for any State, even at the previous \$10 per capita materiality threshold.

Staff propose to recommend the commission:

- not pursue the data request for State roads spatial data.

Other issues

- 93 Staff also propose to use the ABS's Urban Centres and Localities (UCLs) to define geographical areas in the Transport and Roads categories from the 2015 Review. This is because they capture less of the surrounding hinterland of urban areas, which is more appropriate for determining urban boundaries for the urban and rural road length factors. It means that the rural road length algorithm and the urban population used in these factors would be recalculated using UCLs.
- 94 Previously, we used the ABS's Statistical Districts and Greater Capital City Statistical Areas in both of these disabilities until the 2013 Update.⁵⁹
- 95 While we propose to use UCLs where possible in the Roads assessment, the SMVU data used by BITRE is loosely based on ABS's Statistical Districts and Greater Capital City Statistical Areas. As there are no other comparable data appropriate for our purposes, the urban and rural road use factors would not be based on UCLs. This would be inconsistent with the road length factors, but we believe the effect will be minor.

State views are sought on:

- the use of UCLs to determine urban/rural boundaries and the urban and rural road length disabilities, despite SMVU data (used in the road use factors) being based upon Statistical Districts and Greater Capital City Statistical Areas.

⁵⁹ In the New Issues paper for the 2014 Update, staff proposed to use ABS's Significant Urban Areas (SUAs) to define urban areas and determine urban populations in this category. This is due to changes in ABS geographical classification structures and previous classification structures no longer being available.

- 96 Staff propose making the following minor updates to the Roads assessment:
- The rural road length algorithm and local road lengths will be recalculated to account for changes in populations using the new 2011 Census data.
 - The average of six-year BITRE data (based on ABS's Survey of Motor Vehicle Use (SMVU)) that we use for our urban and rural use factors will be updated using the most recent six-year block of data (which we anticipate to be from 2007-08 to 2012-13). Previously we averaged data from 2002-03 to 2007-08.

Staff propose to recommend the commission:

- continue the assessment method adopted in the 2010 Review, with changes limited to some technical changes to the urban/rural boundaries

PROPOSED CATEGORY STRUCTURE

- 97 We propose the following assessment structure for this category in the next review.

Table 18-1 Proposed Roads category structure

Component	Disability	Influence measured by disability
Service expenses	Local roads	Recognises the differences between States in the cost of maintaining local roads managed by State governments.
	Urban roads	Recognises that the length of the urban road network, traffic volume and heavy vehicle use influence the cost of providing roads maintenance services in urban areas.
	Rural roads	Recognises that the length of the rural road network, traffic volume and heavy vehicle use influence the cost of providing roads maintenance services in rural areas. It also includes regional location influences.
	Bridges and tunnels	Measures bridge and tunnel maintenance costs as EPC.
	Other services	Recognises other unmeasured factors that may influence the cost of providing roads maintenance services. This is an EPC assessment.
	Location	Recognises the differences in the cost of providing labour and non-labour resources between States.
Other expenses	Administrative scale	Recognises the unavoidable costs each State incurs to provide the policy and administrative infrastructure necessary to provide the minimum unavoidable service, regardless of the size of the task.
	National capital	Recognises the costs to the ACT arising because of Canberra's status as the national capital and seat of government.
	Native title and Land rights	Recognises State costs of settling native title and land rights claims made under Australian Government legislation.

CHAPTER 19 – TRANSPORT

2010 REVIEW APPROACH

- 1 In the 2010 Review, the Transport services category included mainly State operating and capital subsidies to providers of transport services. It also included departmental expenses. The category is dominated by urban public passenger transport subsidies.
- 2 The commission's assessments covered the expenses directly incurred by the general government sector and subsidies to PNFCs and private providers.
- 3 The assessment had 3 components.
 - The urban subsidies assessment was based on the proportion of the population living in urban centres, the size of those centres and what on average States paid to subsidise centres of different sizes. Evidence showed that large cities, such as Sydney and Melbourne, received a significantly higher per capita subsidy than smaller cities.
 - The non-urban operating subsidies assessment was based on the proportion of State populations that live outside capital cities.
 - Capital subsidies were assessed equal per capita (EPC).

ISSUES AND ANALYSIS

- 4 The major issues to be considered for this assessment are:
 - the implication of expanding the scope of the equalisation budget to include urban transport PNFCs
 - an alternative assessment of net operating expenses
 - Non-urban subsidies – disability based on distance between urban centres.
- 5 The assessment of transport capital needs is covered in the chapter on Transport infrastructure and, therefore, is not further discussed in this chapter.

Scope and structure of the assessment

- 6 The commission has decided to expand the scope of fiscal equalisation and treat urban transport services, including those provided through PNFCs, as a general government function. Unlike many services provided through PNFCs, urban transport services have few commercial features. They have more similarities to the services provided by general government agencies. They depend on government funds to meet operating costs and pay for major investment; the services stem from social policy objectives; and government departments make the policy on service delivery

and charges. In New South Wales, Queensland and South Australia, public transport is now, to different extent, delivered by government departments.

- 7 Under this approach, the adjusted budget will be a consolidation of the operating statements of the general government sector and the urban transport PNFCs. It will include the revenue, expenses including depreciation, and investment of urban transport PNFCs, but not transfers between the States and their PNFCs, such as concessions, subsidies and dividends. Subsidies to private providers will continue to be included.

Staff propose to recommend the commission:

- assess, for urban transport, consolidated net operating expenses of the general government and PNFC sector, and subsidies to private providers
- assess, for non-urban transport, subsidies to service providers.
- assess urban transport investment and depreciation in the investment and depreciation categories as for other services to ensure these expenditures are assessed in the same way.

Urban net operating expenses

- 8 **Background.** The 2010 Review assessment of urban transport was based on a regression model using population of urban centres as a broad indicator of needs because actual per capita subsidies were observed to rise with centre size. Per capita operating subsidies were regressed on the logarithm of Urban Centre – Locality (UCL) population.
- 9 Consultants⁶⁰ were engaged by commission staff to estimate the relationship between urban population size and per capita operating subsidies.
- 10 Assessed subsidies were estimated for each urban centre using the results of the regression model and summed for each State to give assessed urban subsidy expenses. Per capita assessed subsidies were multiplied by the location factor.
- 11 In their submissions, Queensland and Western Australia questioned the reliability of the data used as the basis of the relationship between urban operating subsidies and urban population. In particular concerns were raised about the consistency of the data between States and difficulties associated with collecting data based on UCLs or location more generally. Queensland considered that the suitability and comparability of the available data should be reviewed or, at the very least, a discount should be considered for this assessment. Both States also raised concerns about the suitability of the method employed to estimate the relationship and the robustness of the

⁶⁰ The Institute for Sustainable Systems and Technologies (ISST) at the University of South Australia.

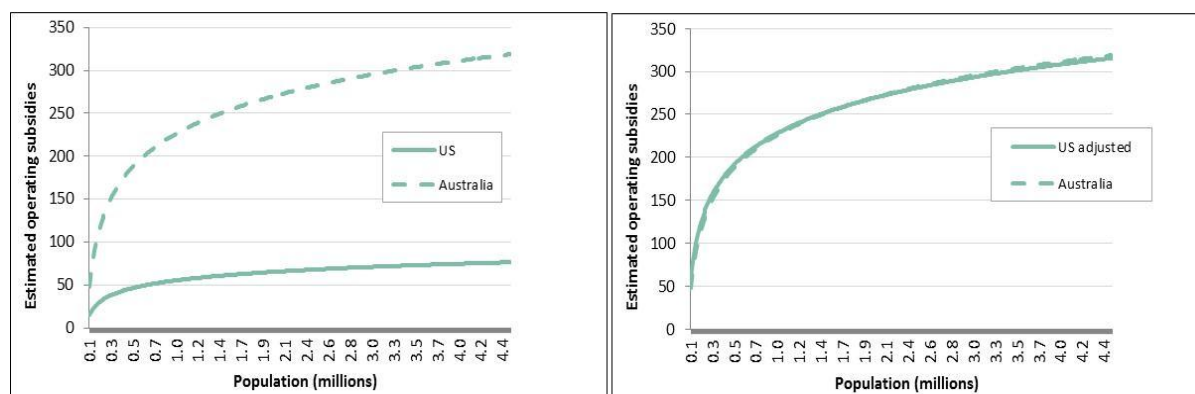
relationship, especially whether large cities and policy differences are driving the relationship.

12 Staff have reviewed the 2010 Review method by:

- comparing the 2010 Review regression results with a similar regression based on data from urban centres in the United States (US), as a reality check
- re-running the 2010 Review urban operating subsidies assessment with the recently collected data
- reviewing the literature on urban transport cost
- developing an alternative model based on the literature review and previous State comments.

13 **US data.** The first chart in Figure 19-1 compares the current estimated per capita operating subsidies for Australia with the US equivalent. Per capita subsidies are higher in Australia than the US⁶¹. To improve the comparability of the 2 series, we have scaled up the US estimates by the ratio of Australian average per capita estimated subsidies to US average per capita estimated subsidies. The adjusted US series and the Australian series are shown in the second chart. The 2 series are very similar, which, as a reality-check, lend support to the current assessment. It suggests that data quality and State policy differences are not driving the observed relationship.

Figure 19-1 Estimated per capita operating subsidies, Australian versus US urban areas, 2004-05 to 2006-07



Note: Australian subsidies estimated using data from 2004-05 to 2006-07. US per capita subsidies calculated as operating expenses minus fare revenue divided by urbanized area (UZA) population and converted to 2007 AUD using market exchange rate and Australian CPI to improve comparability.

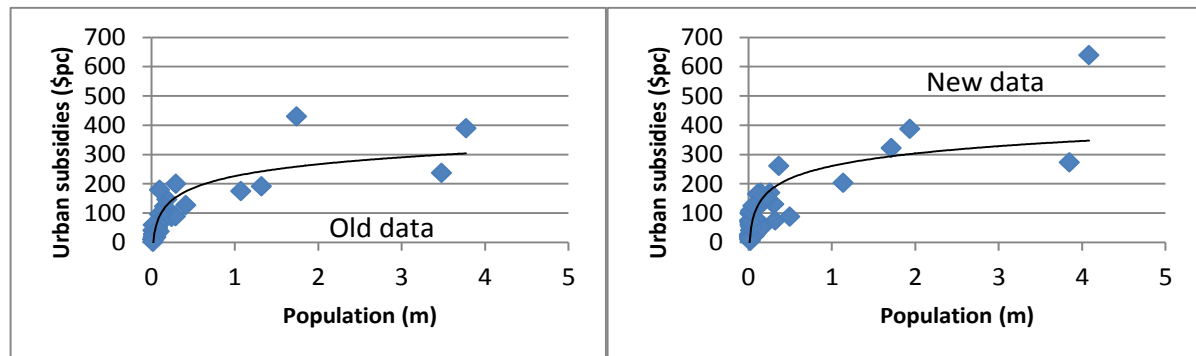
Sources: State provided data, US National Transit Database, Reserve Bank of Australia.

14 **2010 Review model with updated data.** Earlier this year, we collected data on urban transport expenses and revenue by urban centre, for the period 2008-09 to 2011-12.

⁶¹ This is mostly because cost recovery is higher in the US.

- 15 We have re-run the 2010 Review model using the new data. In Figure 19-2, the chart on the left shows the relationship between public transport operating subsidy and urban population used in the 2010 Review assessment. The chart on the right shows the relationship with the new data.

Figure 19-2 Relationship between public transport operating subsidy (\$pc) and urban population (million), average of 2008-09 to 2011-12 and average of 2004-05 to 2006-07



Source: State provided data.

- 16 The 2 relationships are very similar. Below are the equation results, although the goodness-of-fit is not as high using the new data.
- Equation based on the new data: $y = 61.648\ln(x) + 260.35$, $R^2 = 0.6725$
- Equation based on the old data: $y = 61.463\ln(x) + 231.54$, $R^2 = 0.7669$
- 17 The old dataset contained 35 observations, while the new dataset contains 42 observations. The old equation generated negative per capita subsidies for urban centres with populations around 23 000 whereas the new equation only generates negative subsidies for urban centres with populations around 14 500. Therefore, an adjustment for negative estimated subsidies would not be necessary.
- 18 **Literature review.** The 2010 Review model measures the impact of urban population on the need for subsidies. The economic literature focuses on the costs of urban transport rather than subsidies. Models of transport costs include several influences rather than just one as our current model does. Urban population is a neutral measure of the transport task. It is used as a proxy for the size of the task. However, it may not give a full picture of demand and cost.
- 19 In the 2010 Review, the consultants could not find in the literature any work undertaken in the past on the relationship between city size and public transport subsidy. However, they found a considerable body of information about public transport costs. The consultants noted there is relatively little published data on public transport costs in Australia.

- 20 The consultants wrote that the cost of providing public transport in a city is a function of:
- the transport task that is to be performed; that is, the passenger-km of travel
 - the intensity of public transport use; that is, the quantity of public transport (for example, vehicle-km of services) needed per passenger-km of travel
 - the technical efficiency with which the public transport services are provided; for example, the cost per vehicle-km of service.
- 21 Addressing government subsidies, the consultants concluded that subsidies needed for public transport are a function of:
- the cost of providing public transport
 - the quantity of public transport travel
 - the fare per unit of public transport travel.
- 22 The literature suggests, and some examples are given below, that the main influences, other than modal and technological⁶², on the cost of providing public transport in the Australian context include:
- land area of the urban centre covered by the transport network
 - population density.
- 23 SGS Economic and Planning produced a discussion paper in 2003 for the Western Australia government on the costs of urban form. The paper discussed the literature on the impact of urban form on the cost of public transport. In the Australian context where the choice for urban development is between geographical spread and urban in-fill, the paper concluded that geographical spread will reduced demand for transport and increase costs compared with urban in-fill.
- 24 Cubukcu (2008)⁶³ found that bus operating costs decline with population density, the average street segment length, the percentage of flat land, the size of the service area served by one route mile and increases with the service territory area and the percentage of vehicles over 11 years of age.
- 25 Kenneth A. Small and Erik T. Verhoef⁶⁴, in a broad discussion of the costs of public urban transport, wrote that influences on costs include such things as operating cost per route-kilometre and operating cost per vehicle-kilometre, which reflect the size of the services area and population density.

⁶² We assume that all States have access and can afford comparable technologies. Any differences between States would be attributed to policy choice. The same applies to efficiency.

⁶³ See Cubukcu, K.M. (2008), Examining the cost structure of urban bus transit industry: does geography help? *Journal of Transport Geography*, vol 16, p.278-291.

⁶⁴ The Economics of Urban Transportation by Kenneth A. Small and Erik T. Verhoef, 2007.

- 26 In regard to quantity of public transport travel, Hensher (2000)⁶⁵ wrote that demand for public transport comes from:
- commuters to and from work
 - school students
 - people who are dependent on public transport (such as the elderly, people from low-income households and people without drivers licences)
 - people who use public transport on an infrequent basis for optional travel (such as urban tourists and those attending social/recreational events).
- 27 Balcombe et al⁶⁶ said that there are many influences on the demand for public transport and their relative importance may vary between urban centres. The main influences that are relevant to the commission work are:
- population characteristics such as the proportion of students, disabled and aged persons
 - employment level and economic activity
 - urban form and population density
 - the presence of substitutes (such as ownership of private vehicles and walking/cycling options)
 - fare levels
 - service levels such as frequency and reliability of services, occupancy rates, average network speeds, ease of access and the degree of interaction between transport modes/networks.
- 28 **Alternative (multivariate) model.** From the literature review, we consider that the following influences should be tested in an alternative model.
- urban form (measured by population levels and area separately)
 - service levels (measured by route kilometres per square kilometre)
 - fare levels (measured by single zone, peak time, adult transfer fare)
 - the presence of rail - in the past, States have argued that the presence of rail increased costs
 - urban topography (measured by the proportion of zero sloped urban land⁶⁷ and the number of urban road and rail waterway crossings per square kilometre). In the past, States argued that urban topography was a major influence on the cost of urban public transport.

⁶⁵ Hensher, D. (November 2000), Urban Public Transport Challenges, *The Drawing Board: An Australian Review of Public Affairs*, vol. 1 no. 2, pp.47-62, University of Sydney.

⁶⁶ The Demand for Public Transport: A Practical Guide, R. Balcombe (editor), TRL Report TRL593, 2004.

⁶⁷ The proportion of zero sloped land is calculated as the proportion of the relevant urban area that has a slope of between zero and 2% as measured by Geoscience Australia's Smoothed Digital Elevation Model (DEM-S) – 1-second data. The satellite images that comprise the DEM-S – 1 second data disaggregate the urban area into a grid with 30m X 30m squares.

- 29 We used data recently collected from the States and Geoscience Australia. The data collected from States on route-kilometres did not appear reliable and, therefore, were not used in the regression analysis. We could not collect fare data for all urban areas with populations with 20 000 people or more.
- 30 UCLs have traditionally been used by the commission. For some capital cities and other urban areas, such as Sydney and the Latrobe Valley, UCLs do not fully capture the scope of the transport task. We have used an alternative geography to measure both population and area for urban centres – UCLs contained within an ABS Significant Urban Area⁶⁸ (SUA).
- 31 We consider that this generally better captures the transport task. We have also aggregated some SUAs such as Moe-Newborough and Traralgon-Morwell which comprise the Latrobe Valley in Victoria and Perth and Ellenbrook in Western Australia which better matches the Transperth network. Adopting this geography will also improve consistency with the assessment of roads expenses.
- 32 We have included observations for urban centres with populations of 20 000 or more whether or not these urban centres receive subsidies for urban public transport services. This expanded the dataset to 65 observations.
- 33 We have also weighted observations according to their population, so that larger weights are given to urban centres with larger populations. This gives the same weight in the regression to individuals, regardless of which urban centre they reside in. The old method gave a lower weighting to an individual living in larger urban centres relative to individuals living in smaller ones.
- 34 We estimated a multivariate regression model of net urban operating expenses with the following variables included:
- SUA population residing in UCLs (millions, in logarithmic form, SUAs over 20 000 only)
 - the land area of UCLs contained in SUAs (square kilometres, in logarithmic form)
 - the presence of urban rail in capital cities (dummy variable)
 - the proportion of zero sloped land
 - the length of rail and road waterway crossings within urban area (in metres per square kilometre)
 - interaction terms with the rail dummy (the interaction term between presence of rail and land area was excluded due to strong multicollinearity).
- 35 The results of the model are shown in Table 19-1.

⁶⁸ Significant Urban Areas (SUAs) are a new ABS geographical unit that describe extended urban concentrations of more than 10,000 people.

Table 19-1 Regression results for multivariate model

	Variable	Standard error	t-value	Significant(a)
Intercept	567.829	215.047	2.640	*
Log of population of urban centre (million)	86.805	28.334	3.064	**
Log of area (square kilometres)	-58.126	30.840	-1.885	.
Presence of rail	739.612	52.712	14.031	***
Topography – percentage of zero sloped urban land	-9.171	64.013	-0.143	
Topography – length of road waterway crossings per square kilometre	1.869	2.065	0.905	
Topography – length of rail waterway crossings per square kilometre	-4.624	5.066	-0.913	
Log of population X rail	-41.677	23.529	-1.771	.
Percentage of zero sloping land X rail	-1498.511	110.536	-13.557	***

(a) '***' significant at 0.001, '**' significant at 0.01, '*' significant at 0.05, and '.' significant at 0.1.

Source: Staff estimates.

- 36 Variables were eliminated sequentially on the basis of significance. The end result of this process of elimination produced an alternative model to the bivariate model used in the 2010 Review. The alternative model is shown in Table 19-2.

Table 19-2 Regression results for alternative model

	Variable	Standard error	t-value	Significant(a)
Intercept	153.783	22.732	6.765	***
Log of population of urban centre (million)	31.890	9.818	3.248	**
Presence of rail	726.163	46.828	15.507	***
Percentage of zero sloping land X rail	-1507.717	73.959	-20.386	***

(a) '***' significant at 0.001, '**' significant at 0.01.

Source: Staff estimates.

- 37 The alternative model implies that for urban areas without rail, population is the main driver of net operating expenses, but for capital cities with rail services, the presence of rail itself and in particular the slope of the land within the urban area become more important than population.
- 38 At this stage, staff have a preference for retaining the 2010 Review model, updated with the most recent data because it is simpler and more policy neutral. While the size of the task influences whether rail is a viable mode, State policy on when it is introduced has an influence.

Staff propose to recommend the commission:

- retain the simple model for the purposes of this assessment.

Non-urban subsidies assessment

- 39 Western Australia said that the non-urban subsidy factor should be adjusted to recognise distance between population centres as a disability. Western Australia noted that Victoria, Queensland, Tasmania and the Northern Territory provide subsidised services to populations in remote areas. Western Australia argued that compared to Victoria and Tasmania, it needed to cover a much larger area to service a similar level of population in remote areas, which prevented it from achieving economies of scale.
- 40 It is likely that the size of subsidises depends on how large non-urban populations are and how dispersed they are within each State. While the current assessment captures the size of the non-urban population, it does not capture the impact of population dispersion.
- 41 Staff would prefer to use an existing measure of dispersion. One possibility would be to use the rural road length factor as a proxy for the impact of distance on the non-urban subsidies. This assessment would be material at \$30 per capita. Another possibility would be to apply the regional cost factor to non-urban subsidies⁶⁹. By itself, this assessment would not be material.

States views are sought on:

- a possible assessment of relative distance between urban areas.

PROPOSED CATEGORY STRUCTURE

- 42 Staff propose the following assessment structure for this category in the next review.

⁶⁹ Currently, the non-urban subsidies assessment only includes an interstate location assessment.

Table 19-3 Proposed Transport services category structure

Component	Disability	Influence measured by disability
Service expenses	Urban operating subsidies	Recognises the different costs of providing subsidised transport services in urban centres according to their size.
	Non-urban subsidies	Recognises the different costs of providing subsidised transport services in non-urban areas.
	Location	Recognises the differences in the cost of providing labour and non-labour resources between States.
Other expenses	Administrative scale	Recognises the unavoidable costs each State incurs to provide the policy and administrative infrastructure necessary to provide the minimum unavoidable service, regardless of the size of the task

CHAPTER 20 – PRIORITY ISSUE TRANSPORT INFRASTRUCTURE

2010 REVIEW APPROACH

- 1 In the 2010 Review, roads related capital expenditure was assessed in the Investment category and differences in use and length of required urban and rural roads were recognised. As well, an amount of investment equal to 50% of the national network roads payments was assessed using the distribution of these payments because of a concern that the State and local roads disabilities did not fully capture the national roads needs in each State.
- 2 As a consequence, while most payments for roads construction had an impact on the relativities, the result of the recognition of the national network roads needs in the Investment assessment meant that only 50% of payments for the construction of national network roads had an impact on the relativities.
- 3 In contrast, needs to hold differential amounts of most other transport infrastructure were not assessed. Other transport infrastructure is largely owned by State Public non-financial corporations (PNFCs) which are represented in State balance sheets as equity (part of Net Financial Worth (NFW)). As the objective of the commission was to distribute the GST so that States hold equal per capita NFW after they have delivered services and raised revenue at average standards, no differential requirement to hold other transport infrastructure was recognised. Only changes due to population growth had an impact on the relativities. While some States may need to hold, say, more rail assets than the average, this only meant that the composition of their financial wealth differed from the average.
- 4 Any Commonwealth payments for other transport infrastructure, including payments for rail, were regarded as wealth transfers to the States and redistributed on an equal per capita (EPC) basis. Any payments which are not distributed to States on an EPC basis therefore impact on the relativities.

TERMS OF REFERENCE

- 5 The terms of reference for the 2015 Methodology Review ask the commission to have regard to the recommendations of the GST Distribution Review (October 2012) to:
 - develop a new transport infrastructure assessment. This should include, 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 (Recommendation 6.1).

- 6 Staff consider in this chapter:
- how a new transport infrastructure assessment might be developed
 - how an approach to the treatment of associated nationally significant transport infrastructure payments which should affect the relativities only in part might be developed and whether that is appropriate.

NEW TRANSPORT INFRASTRUCTURE ASSESSMENT

The task

- 7 The GST Distribution Review report said that the commission's decision to equalise States' net financial worth in the net lending assessment imposed a constraint on the recognition of capital needs for subsidised PNFCs. The report suggested that the commission review its approach so that capital needs for subsidised PNFCs could be fully recognised.
- 8 We interpret the terms of reference to require the development of an assessment of infrastructure expenditure relating to roads provided by the general government sector and other transport services which are provided by subsidised PNFCs.
- 9 South Australia, Tasmania, and the Northern Territory supported the development of a new transport infrastructure assessment, suggesting this might be the most appropriate way of recognising relevant needs. However, their submissions did not suggest how this might be done. No other States commented.
- 10 The commission has decided to expand the scope of equalisation to include urban transport PNFCs because these are not fully commercial and have strong similarities to the services provided by general government agencies. They depend on government funds to meet recurrent costs and pay for major investment; the services stem from social policy objectives; and government departments make the policy on service delivery and charges.
- 11 Some States (Queensland, the ACT and the Northern Territory) did not support expanding the scope of fiscal equalisation to include PNFC activities, but their comments were general and not specifically focussed on the transport issues. Queensland noted the difficulties in providing financial information on its PNFCs. Other States, such as South Australia, accepted it may be necessary to expand the scope to assess transport infrastructure needs.
- 12 Staff consider that including the investment and depreciation of urban transport PNFCs in the adjusted budget is the best way of ensuring that capital needs of States relating to roads and subsidised urban transport services can be assessed.
- 13 We note however, that similar transactions of other transport PNFCs, such as ports or freight rail, will not be included as these PNFCs operate on a commercial basis and

are not like government services. As a result, needs relating to the differential per capita holdings of all transport infrastructure will not be assessed, although changes in requirements because of population growth will be.

- 14 Furthermore, staff are not proposing to recommend to the commission that a single transport infrastructure assessment be developed. We consider that the roads infrastructure assessments (in investment and depreciation) should be continued largely as they are and that new urban transport investment and depreciation assessments be developed.

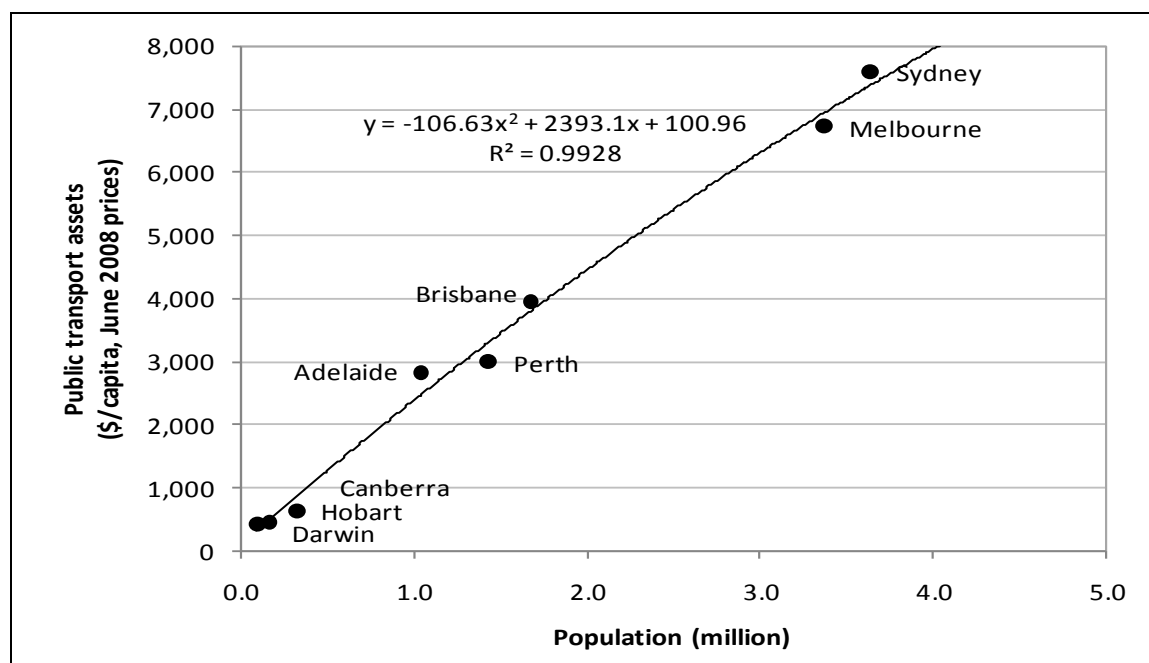
Proposed new urban transport investment assessment

- 15 An urban transport investment assessment can be approached in much the same way as the roads investment assessment. It can be included in the overall Investment assessment and have the same 3 types of disabilities assessed.
 - Population growth – this is already captured in the 2010 Review assessments, but indirectly in the net lending assessment because the value of PNFC assets form part of the State government net financial worth. It would be explicitly brought into an assessment of transport investment needs.
 - Quantity of stock disabilities – the Investment category recognises that some States require different amounts of stock per capita to deliver the average level of services. For many functions, the disabilities assessed for operating expenses are adopted, but for roads in the 2010 Review, specific capital disabilities were recognised. We consider this might be appropriate for urban transport infrastructure.
 - Cost disabilities – the Investment category uses the location disabilities to measure the impact of interstate wage differential and the higher cost of building in more remote areas of States. This approach is reconsidered in the Capital assessments chapter
- 16 Therefore, for population growth and cost disabilities, we would use the methods used in the Investment assessment.
- 17 For the quantity of stock disabilities, our preference would be to assess transport infrastructure specific use disabilities, using a similar approach to that currently used for the urban operating subsidies (or what we would now call net expenses).
- 18 Figure 20-1 shows the 2010 Review relationship between as-new replacement value of urban transport assets and the population of capital cities developed by consultants.⁷⁰ This was done using data from 2004-05 to 2006-07. The correlation

⁷⁰ The analysis is for capital cities only. The consultants collected the data from annual reports. They found it difficult to collect data for smaller cities. The as-new replacement values represent replacement value plus accumulated depreciation.

between the 2 indicators is very strong. We could use the results of such a model to derive assessed stock and calculate a transport infrastructure stock factor.

Figure 20-1 2010 Review, relationship between the value of public transport assets and capital city size



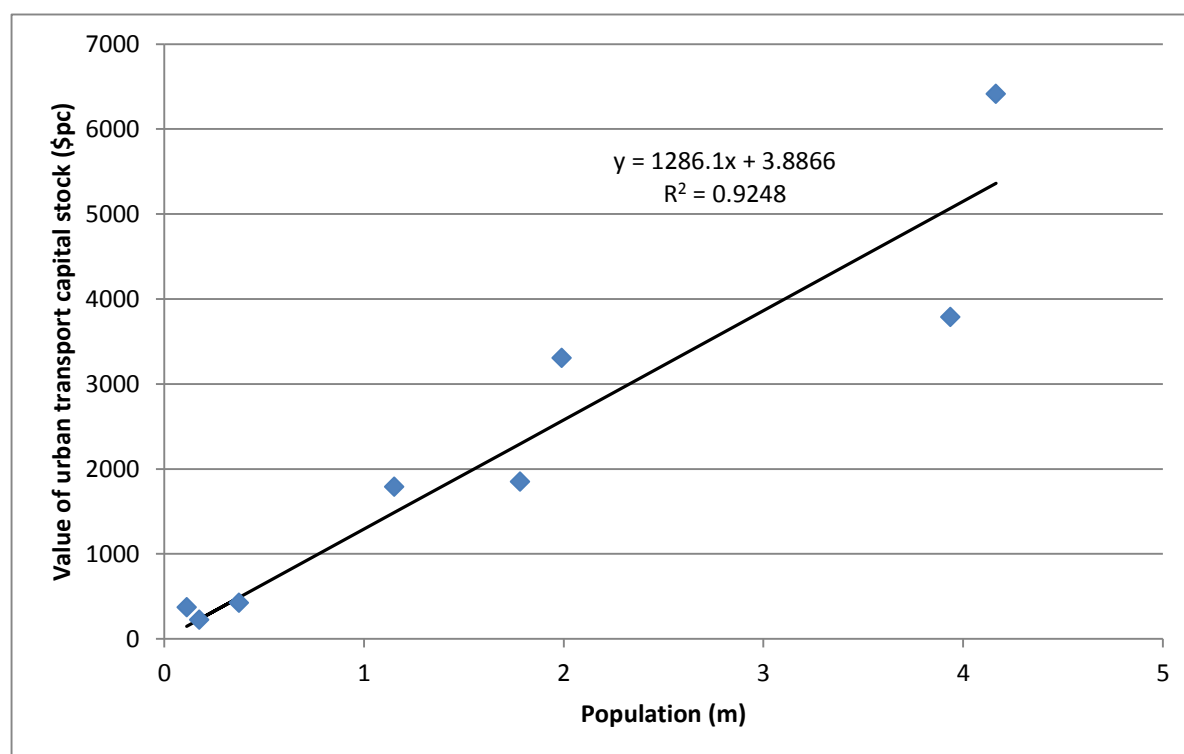
Source: CGC database for population and consultant analysis as reported in Appendix C.

- 19 Using value of assets⁷¹ data collected from the States earlier this year, we have re-run the consultant's model. For simplicity, we used a linear form instead of the consultant's quadratic form. The relationship is shown in Figure 20-2. At this stage, we do not have data for Brisbane (rail assets only) and Darwin. Estimated values were used as a placeholder. The new relationship uses actual value of assets while the consultant's estimated replacement value.
- 20 The consultants used only capital cities because of difficulties in obtaining asset values. We have done the same. However, our reason for doing so is that the bulk of the State assets are held in capital cities and satellites because State PNFCs provide mainly metropolitan bus and rail services. As far as we can ascertain, only New South Wales with Newcastle and Wollongong, Queensland in the south-east and Tasmania own, through their PNFCs, urban transport assets in non-capital cities.
- 21 Staff propose an assessment of transport investment based on a factor derived from the relationship between the value of public transport assets and city size.

⁷¹ These values do not include accumulated depreciation.

- 22 Defining city size in a policy neutral way is difficult. We propose using the ABS capital city (Urban Centre/Locality) population in most cases.⁷² This captures the concept of ‘capital cities and their main satellites’ for most States. However, for Sydney, we consider Newcastle, the Central Coast and Wollongong to be part of the concept and for Brisbane, the Gold Coast and the Sunshine Coast, would be included. At this stage, we are not planning to include satellites of other capital cities unless a case can be made on the basis of services (and associated infrastructure) being provided in a fully integrated way.

Figure 20-2 Proposed for 2015 Review, relationship between the value of public transport assets and city size



Source: State collected data.

- 23 Table 20-1 summarises the actual and assessed per capita stocks and disability factors derived from the two models. It suggests that the relationships between the stock per capita required in capital cities in each State over time has remained relatively stable.

⁷² Under the 2011 Census area classification, the Darwin UCL includes Palmerston and the Hobart UCL includes the former UCLs of Kingston-Blackmans Bay, Bridgewater-Gagebrook, Lauderdale, Old Beach, Fern Tree, Otago.

Table 20-1 Actual and assessed urban transport capital stock

	Sydney	Melbourne	Brisbane	Perth	Adelaide	Hobart	Canberra	Darwin	Total
Consultant's model (2010 Review)									
Actual capital stock (\$pc)	7 333.2	6 519.7	3 809.7	3 237.1	2 742.7	558.6	616.7	516.7	5 411.2
Assessed capital stock (\$pc)	7 343.2	6 804.5	3 624.1	2 857.7	2 401.0	683.1	1 046.1	575.2	5 411.2
Factor	1.357	1.257	0.670	0.528	0.444	0.126	0.193	0.106	1.000
Staff model									
Actual capital stock (\$pc)	6 412.9	3 786.8	3 304.2	1 849.6	1 790.3	223.8	424.1	369.9	3 930.1
Assessed capital stock (\$pc)	5 354.5	5 068.6	2 620.8	2 360.1	1 567.3	340.1	589.4	261.4	3 930.1
Factor	1.362	1.290	0.667	0.601	0.399	0.087	0.150	0.067	1.000

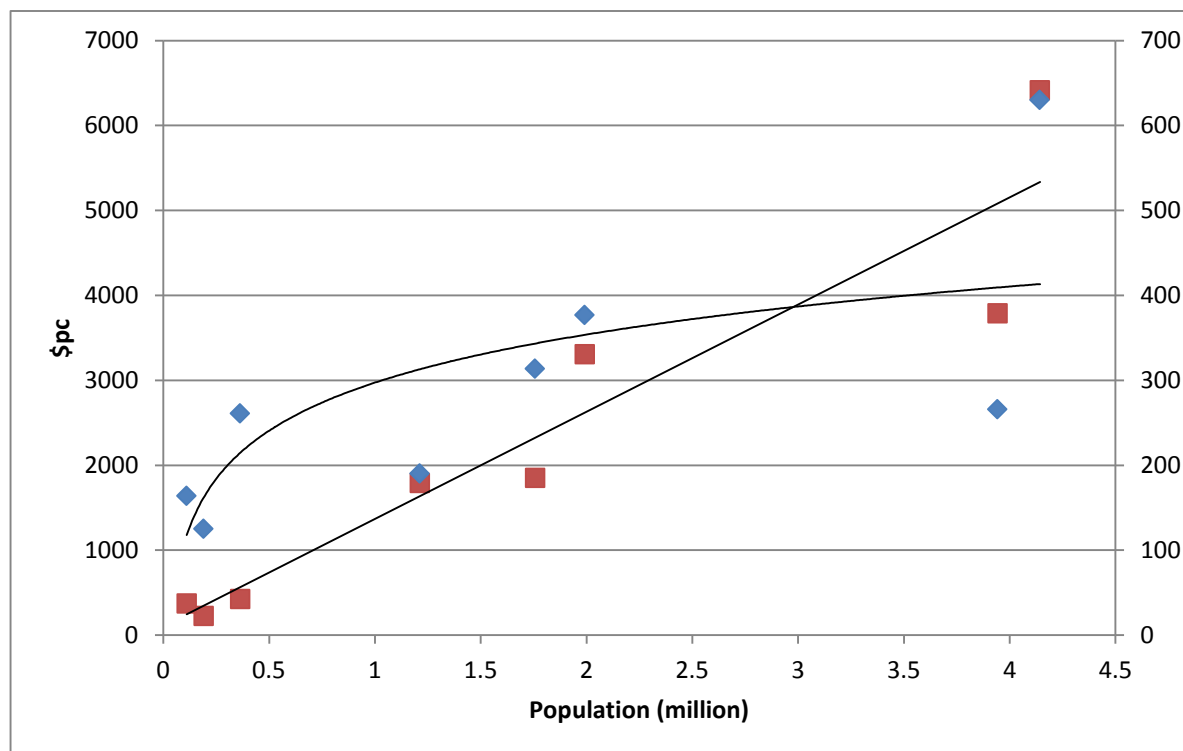
(a) As-new replacement values used for consultant's model, replacement values used for staff model.

(b) Data for Brisbane (Queensland Rail only) and Darwin are 2010 Review data adjusted for inflation and scaled for difference between as-new replacement and replacement values.

Source: State provided data and staff calculations.

- 24 The relationship for capital infrastructure is different from that for operating subsidies. Figure 20-3 compares the estimated per capita value of assets using the above relationship and that calculated for urban operating subsidies.
- 25 Staff consider that the 2 relationships are sufficiently different to warrant assessing operating expenses and investment differently. This would be subject to obtaining asset value data for Brisbane (rail only) and Darwin and to testing whether the 2 relationships are materially different.

Figure 20-3 Comparison between operating subsidies and non-financial assets by capital city size



Source: State collected data.

Assessing urban transport investment

- 26 As for the rest of the investment assessment, urban transport investment would be calculated as shown in Box 1.

Box 1 Calculation of assessed investment

$$\text{Assessed Investment} = \left\{ \left[\left(\frac{K_1}{P_1} \right) p_{i1} \delta_{i1}^u \right] - \left[\left(\frac{K_0}{P_0} \right) p_{i0} \delta_{i0}^u \right] \right\} \times \delta_{i1}^c$$

Where: δ_{i1}^u and δ_{i0}^u are the disability factors affecting the quantity of infrastructure required by State i at the end and the start of the year

δ_{i1}^c is the expense cost disability factors for State i at the end of the year

p_{i1} and p_{i0} are the populations of State i at the end and the start of the year

K is the Australian total stock of infrastructure

P is the Australian population

- 27 Average opening and closing stock per capita would be derived from the consolidated General Government and PNFC urban transport balance sheet. The urban transport proportion would be estimated using the urban transport share of depreciation (if data on asset value by function is not available).
- 28 The stock disability factors would be obtained from the regression relationship as shown in Table 1.

- 29 The populations and location cost disabilities would be as for other infrastructure assessments.

Updating the assessment

- 30 The question arises as to how we should update the assessment. The assessment requires average opening and closing stock per capita and opening and closing stock disabilities derived from the regression model.
- 31 Provided we can obtain an annual consolidated balance sheet, opening and closing stocks per capita can be derived from that.
- 32 Updating the stock disabilities ideally would require the regression model relationship to be updated every year. We would expect the rail investments in the larger cities to potentially change the slope and/or the shape of the relationship. However, because of difficulties in obtaining asset value for capital cities and their satellites, we do not think it would be practical to update the relationship every year. The apparent stability of the relationship over time suggests it may not be necessary either.
- 33 If the regression model is not updated, we could make one of two assumptions:
- We could assume that per capita stock required did not change with population growth in each city; that is as cities grow they do not need more stock per person. The capital stock disabilities would not change. State investment needs would be attributed to changes in only average stock levels and State population growth.
 - We could update the stock factors by updating the capital city populations. This would have the effect of increasing the per capita infrastructure allocated to States as their capital city populations grew.
- 34 Evidence on how capital stock needs change in response to changes in city size would inform the decision on which would be the best approach. The change in the capital stock disabilities over time suggests that population growth does have an impact but that it is unlikely to be large. Staff consider that freezing the stock disabilities until the model relationship can be re-estimated is simpler and more reliable.

Depreciation assessment

- 35 Depreciation expenses for each urban centre could not be separated out from operating expenses used in the regression analysis. The data used in the 2010 Review by the consultants to derive the regression results included depreciation expenses and so do the updated data we recently collected.
- 36 This means that different disabilities would apply to depreciation expenses and investment, if separate models are adopted for operating expenses and capital. The options are:

- to leave the data as they are and use the operating expenses model, which includes depreciation, to assess depreciation expenses; these could be assessed with transport services operating expenses or in the Depreciation category
- to identify depreciation expenses, remove them from operating expenses and re-run the regression model for operating expenses. The depreciation expenses would be assessed in the Depreciation category, using investment disabilities.

37 Staff consider it most practical to leave the data as they are because we are unlikely to be able to remove depreciation from every urban centre's operating expenses reliably. The decision on where the assessment is undertaken is not important.

Staff propose to recommend the commission:

- assess urban transport investment using the relationship between capital city asset values and population, subject to obtaining asset value data for Sydney, Brisbane and Darwin and testing whether the 2 relationships are materially different
- apply the assessment to capital cities and their main satellites only
- freeze the stock disabilities until the regression model can be re-estimated
- assess depreciation expenses using the net operating expenses relationship.

APPROPRIATE TREATMENT OF COMMONWEALTH TRANSPORT INFRASTRUCTURE PAYMENTS

- 38 The terms of reference ask the commission 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.
- 39 The GST Distribution Review report noted that, while all States supported the general principle of *including* Commonwealth payments for capital purposes in the equalisation process, there were concerns about the treatment of large payments for infrastructure purposes. It said that Commonwealth payments for road and transport infrastructure should not be treated differently. Therefore, it recommended that only 50% of nationally significant payments for road and rail infrastructure should be recognised in the equalisation process, because of their dual national and State purposes.

State views

- 40 **Treatment of transport infrastructure payments.** Victoria said consistent treatment of rail and road Commonwealth funding was essential because the current treatment influences State decisions on which projects are considered the most viable. It said

that both road and rail projects boost national productivity, can be one-off and very large and the redistribution of Commonwealth funding provided to support these projects to other States through the GST process does not reflect Commonwealth policy intent. Therefore it argued that all nationally significant payments should affect the relativities on a 50% basis, to recognise their dual national/State purpose.

- 41 New South Wales considered that all Commonwealth payments relating to infrastructure of national significance should be separately identified and separately assessed but did not support the adoption of an arbitrary 50% weighting. It said that deciding which projects were nationally significant should be based on criteria agreed between the States and the Commonwealth. As an alternative, New South Wales suggested that treating all infrastructure grants to the States as no impact on the relativities should be considered.
- 42 South Australia and the ACT supported the development of a framework to identify projects of national significance. South Australia said it favoured treating most transport infrastructure capital payments as having an impact on the relativities. However, it accepted that in some cases Commonwealth payments will fund infrastructure that addresses both national and State tasks, and this may require some form of discounting. It therefore supported the development of a framework for identifying projects of national significance. The ACT agreed in principle that there was a case for discounting Commonwealth payments for transport infrastructure where there are identifiable national benefits from such projects.
- 43 Queensland said that due to the large scale funding required for some rail projects, certainty of the GST treatment by the commission is required at the time of decision-making. It therefore argued that the Commonwealth in consultation with States should determine the treatment of these payments. Queensland proposed that the most suitable treatment of Commonwealth rail infrastructure payments should be decided on a case by case basis by the Commonwealth in consultation with the relevant States at the time of decision-making by the relevant governments on that project. The Commonwealth would then issue a direction to the Commission on the application of the concession.
- 44 Western Australia and Tasmania did not support the approach advocated by the GST Distribution Review. Western Australia said not including 50% of Commonwealth infrastructure payments could be part of a more general discount to revenue capacity. However, it considered that such a discount could influence whether States sought capital or recurrent funding.
- 45 Tasmania opposed the development of a framework for the discounted treatment of transport infrastructure payments. It said that such an approach would seek to address the effect on GST shares of instability associated with capital infrastructure payments rather than addressing the cause (the 2010 Review Capital methodology). It said the Commonwealth is best placed to determine the national significance of

capital infrastructure projects and therefore is also best placed to determine the appropriate treatment of such payments.

- 46 The Northern Territory saw merit in the consistent treatment of all transport infrastructure payments. However, it argued discounting Commonwealth payments for nationally significant transport infrastructure projects would only be appropriate if it could be clearly demonstrated that needs were not being adequately addressed under the proposed new transport infrastructure assessment. Any differential assessment for nationally significant transport infrastructure projects would require identification of such projects. In this regard, the Northern Territory considered that a set of criteria be developed to assist in identifying nationally significant payments.
- 47 **Operationalising projects of ‘national significance’.** All States agreed that identifying projects of national significance would be difficult. In particular, Western Australia said that deciding which projects are nationally significant would be arbitrary and contentious.
- 48 However, States have proposed a number of ways forward.
- 49 The most obvious one is that proposed by New South Wales, Queensland and Tasmania. These States suggest that the States and the Commonwealth could determine the projects which should not impact on the relativities and include a relevant clause in the commission’s terms of reference. This has happened in the past.
- 50 In the recent bilateral meetings between the commission and State Treasurers, New South Wales also suggested that the commission could use Infrastructure Australia’s (IA’s) list of priority projects to determine payments relating to projects of ‘national significance’. However, most States did not support this. Victoria said these were technical assessments and the Federal Government did not always follow the advice of IA. In its view, decisions on the significance of an infrastructure project were a matter for government. Western Australia said that it was unlikely that IA’s allocation of Commonwealth payments for ‘nationally significant’ projects would genuinely reflect States’ relative needs for such funding. As a result, HFE would be distorted if these allocations were accepted as a measure of needs.
- 51 Most States agreed that ‘national significance’ did not mean ‘special significance’ to one State. South Australia and the ACT proposed criteria relating to spillover benefits to other States or where there are direct economic benefits extended to other States. Queensland suggested that a nationally significant rail project was one which would facilitate national economic growth and productivity gains in the long term. All States recognised the difficulty of applying these concepts in practice.
- 52 South Australia, the ACT and the Northern Territory would prefer that the commission identify the payments to be discounted and the discounting rate.

ANALYSIS AND STAFF VIEWS

- 53 The commission approaches the treatment of commonwealth payments from the perspective of HFE.
- 54 It seeks to identify all material innate differences between States which would mean that a State applying average policy would need to spend more or less than average to deliver the average level of services. Having quantified these differences (needs) it recommends a GST distribution which compensates for their impact on State budgets, giving States the capacity to deliver average levels of services.
- 55 Having equalised States' fiscal capacities through this interim process, it then considers Commonwealth payments as a revenue source whose interstate distribution should have an impact on GST shares. Treating Commonwealth payments in this way is the approach most consistent with fiscal equalisation when needs have been assessed. If payments were treated in another way States would have unequal fiscal capacities.
- 56 What this means is that, if assessments capture all material disabilities and States follow average policy, then all States will be able to deliver the same level of services, including for infrastructure, without having to raise differential taxes. As a result, (lags in the process notwithstanding) the impact on State budgets of the same size Commonwealth payment designed to meet material disabilities in any area of State activity would be exactly the same and States would be neutral as to the purpose for which Commonwealth payments are made.
- 57 However the commission recognises that for practical reasons such as lack of data it may not capture all material needs. It recognises that, where a Commonwealth payment is distributed in part on the basis of needs it does not assess, that part of the payment should not affect GST shares.
- 58 In the 2010 Review, the commission recognised it needed a special needs assessment for 50% of the spending relating to the National Network of Roads (NNR) payment because the other disability factors did not fully recognise State NNR needs. The effect of this assessment was that 50% of the payment had no impact on the relativities.
- 59 Staff believe the commission should continue this general approach because it is consistent with equalising fiscal capacities. We also recognise that in specific cases understanding how the distribution of Commonwealth payments and the 'needs' of States interact requires significant analysis and in the end the judgement of the commission.
- 60 The assessment of the investment and depreciation needs of urban transport PNFCs will now mean that GST will be reallocated to allow States to purchase differential per capita quantities of urban transport infrastructure, including rail. The proposed Urban

transport infrastructure assessment will recognise that the larger the capital city in a State, the greater its urban transport infrastructure needs per capita. It will also recognise the impact of population growth.

- 61 It appears that in future when this approach comes into effect the GST distribution will capture a large part of the needs States experience in providing urban transit infrastructure investment.
- 62 If however there are needs that are not captured, and which are explicitly driving some part of Commonwealth payments for this form of investment, the commission should ensure that part of the payment has no impact on GST shares.
- 63 We seek State advice in identifying these needs, ideally to include them into our assessments, or if that proves impractical so that we can develop procedures to advise the commission on the appropriate treatment of related Commonwealth payments.
- 64 At this stage, having reflected on the advice provided to date in State submissions we are not convinced that projects of 'national significance' would form the basis of a differential treatment from an equalisation perspective.
- 65 We accept that governments may not want Commonwealth payments relating to some projects to be subject to equalisation. If so, the appropriate treatment would be to direct the commission in the terms of reference to ensure that those payments and the associated projects not influence the GST distribution. Because our assessments are likely to address at least part of the interstate differences in needs for these projects, and move GST accordingly, it will be important to exclude both the Commonwealth payments and the projects themselves from our calculations to avoid a situation where both the Commonwealth and other States through the GST distribution inadvertently support a project.
- 66 We can see conceptually how identifying the 'interstate spill over benefits' of projects could form the basis of treating part of commonwealth projects so that they have no effect on the GST distribution. However we doubt that the commission would be able to quantify the size of such benefits or apportion project expenditure to that outcome.
- 67 We seek State advice on how this could be done.
- 68 Table 20-2 shows the redistribution resulting from the inclusion of the roads (including only 50% of NNR) and transport infrastructure Commonwealth payments for the last 6 years. It shows that New South Wales, Victoria, Western Australia and the ACT have received less than their population shares of combined roads and transport infrastructure payments. As a result, these States have received more GST due to the inclusion of these payments in the fiscal equalisation process. The table also shows that one State may be receiving more than its population share of, say,

roads grants but less in transport grants. To look at one grant in isolation may mean missing the overall picture.

Table 20-2 Roads and Transport infrastructure payments and GST impact, 2006-07 to 2011-12

Payment	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Roads	4 630	2 790	4 177	1 375	1 408	386	140	362	15 267
Transport	181	1 117	498	250	555	133	1	3	2 737
Total	4 811	3 906	4 675	1 624	1 963	519	140	365	18 004
	%	%	%	%	%	%	%	%	%
Roads	30.3	18.3	27.4	9.0	9.2	2.5	0.9	2.4	100.0
Transport	6.6	40.8	18.2	9.1	20.3	4.8	0.0	0.1	100.0
Total	26.7	21.7	26.0	9.0	10.9	2.9	0.8	2.0	100.0
Population shares	32.2	24.8	20.1	10.6	7.3	2.3	1.6	1.0	100.0
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Redistribution –roads(a)	243	1 000	-1 086	314	-318	-52	108	-209	0
Redistribution –transport(b)	701	-438	51	41	-355	-70	44	25	0
Redistribution –total(a)(b)	944	562	-1 035	255	-673	-92	152	-184	0

(a) It includes the effect of the roads infrastructure assessment.

(b) Does not include the effect on the GST redistribution of the effect of population growth on transport PNFC equity.

Source: Staff estimates.

- 69 Staff consider that its preferred approach would be for the commission to continue its current approach of ensuring all relevant and material needs are assessed and of treating Commonwealth payments as having an impact on the relativities. If needs are not assessed, the payment or a part of it should not impact on the relativities. If for particular reasons not relating to HFE, the Commonwealth and the States jointly agree that certain payments should not impact on the relativities, then these could be specified in the terms of reference.

State views are sought on:

- Is the current approach for determining the treatment of Commonwealth payments - whether needs are assessed - sufficient to ensure the achievement of HFE and consistency in the treatment of transport and roads infrastructure payments?
- Is the commission failing to assess needs relating to infrastructure projects, including in the proposed new urban transport infrastructure assessment?

- How would the commission ensure that infrastructure needs are not funded twice – through the GST and through direct Commonwealth payments?
- Is it practical for the commission to develop a framework to decide payments of national significance? If so, how would this be done?
 - How could spill over effects be measured?
 - What other approach might the commission adopt to decide the proportion of any payment of national significance for which needs should be assessed?
- Could governments agree on payments which should not impact on the relativities and include instructions on this in commission terms of reference?

CHAPTER 21 – SERVICES TO INDUSTRY

2010 REVIEW APPROACH

- 1 The Services to industry category covers State expenses incurred on the regulation, development and support of agriculture, forestry and fishing, fuel and energy, mining and minerals resources, manufacturing and construction, tourism and other industries. Expenses on agriculture, forestry and fishing make up about 39%⁷³ of the total expenses.
- 2 The Services to industry assessment recognises that expenses serve two main purposes: regulation and business development. Separate assessments are undertaken in relation to each.
 - The assessment of average State expenses on business regulation recognise that differences in the importance of industry in each State, the number of establishments and State populations impact on what States would need to spend if they adopted the average State regulatory arrangements.
 - Business development expenses are assessed on an equal per person basis because there is no clear basis for deciding that one State needs to spend more than any other.⁷⁴

ISSUES AND ANALYSIS

- 3 The main issues for this assessment are:
 - mining industry regulation expenses should be separately assessed
 - fitness for purpose and reliability of 2010 Review State survey data underlying this assessment including the weights assigned to business regulation and business development expenses.
- 4 The first issue directly relates to the terms of reference requirement that the commission consider the appropriate treatment of mining related expenditure. This particular reference arises from GST Distribution Review recommendation 7.3. The supporting material in the GST Distribution Review Final Report for recommendation 7.3 suggested the commission develop an assessment for mining industry regulation and support costs along similar lines to the assessment of the regulation costs for the agricultural sector.⁷⁵

⁷³ Based on average expenses from 2009–10 to 2011–12.

⁷⁴ This was a major issue in the 2010 Review. For more detailed information refer to Chapter 19 in Volume 2 of the 2010 Review report.

⁷⁵ See GST Distribution Review Final Report, October 2012, page 135 and recommendation 7.3.

- 5 This chapter does not address all the concerns raised by the mining States about the failure of the horizontal fiscal equalisation (HFE) process to recognise their economic development needs. Some cross cutting issues are addressed in the chapter on the assessment of mining related expenditure and the other issues are addressed in the categories to which they relate.

Mining industry regulation and support expenses

- 6 Queensland said part of the additional expenses faced by States with mining industries is costs associated with mining departments. It said these costs go beyond general regulation and include costs associated with having a major industry with complex social, economic and environmental interactions with the community and necessitate comprehensive and complex regulatory regimes and policies not present in other States. Queensland said the level of business activity is not a reasonable broad indicator of need.
- 7 South Australia and Tasmania support an examination of the appropriate treatment of mining expenditure on a first principles basis and consistent with HFE. In particular, South Australia said the case for expanding the Services to industry assessment to cover the mining industry should be examined. More generally, the Northern Territory said an assessment of mining related expenditure needs should consider both recurrent and capital expenditure.
- 8 New South Wales, Victoria and the ACT do not support further recognition of mining related costs because no substantiated evidence has been provided of additional disabilities. Victoria opposes expanding the industry support assessment. It said if the costs of mining were to be recognised, a conceptually consistent approach would entail recognising the costs of every other individual industry but this would significantly increase the complexity of the assessment.
- 9 In the current Services to industry assessment, total State expenses on services to industry are split into business regulation expenses and business development expenses. Regulation expenses are split into two industry groups – agriculture⁷⁶ and other industries. In the 2010 Review the commission considered making a separate assessment for mining⁷⁷ industry regulation but staff analysis indicated that separately assessing mining industry regulation would not have a material effect on the GST distribution. Mining was combined with all other industries. However, recent changes in the size of the mining sector and the availability of reliable business count data for the mining industry, means this finding may no longer hold. In 2010-11, total State mining industry expenses were \$531 million or 8% of total category expenses. Staff consider that about two thirds of these expenses are for industry regulation.

⁷⁶ Agriculture refers to agriculture, forestry, fishing and hunting.

⁷⁷ Mining and mineral resources includes fuels such as coal, petroleum and gas.

- 10 Staff estimate that separately assessing mining regulation expenses would increase the materiality of the current assessment for Western Australia (by about \$12 per capita), and to a lesser extent Queensland, South Australia and the Northern Territory.
- 11 This assessment was constructed using weights from a 2010 Review survey of State services to industry expenses. The survey indicated that on average:
 - About 67% of mining expenses in the Services to industry category were for regulation. The remaining mining industry expenses were for business development.
 - About 33% of mining industry regulation expenses were affected by sector size, 22% were affected by the number of mining establishments and 45% were affected by other influences.
- 12 Staff used mining employment as the measure of mining sector size. Value of production was considered less reliable because it is influenced by price fluctuations. In any case, the two indicators produced similar results for 2010-11. Data on the number of mining establishments were sourced from *ABS Counts of Australian Businesses, including Entries and Exits, June 2007 to June 2011*.⁷⁸ Initial discussions with ABS indicate that mining industry data from this source are fit for purpose and of sufficient quality for our purposes.
- 13 Staff considered whether separate assessments could also be done for construction and tourism. However, the level of spending on the regulation of these industries and greater similarity in State circumstances for these industries compared with mining, lead staff to believe that splitting out these industries is unlikely to be material.
- 14 Staff note Queensland's concerns about whether the level of business activity is a reasonable broad indicator of mining regulation and support costs. Staff consider the level of business activity and number of businesses are appropriate indicators of the level of ongoing mining regulation expenses. Staff understand there are a range of industry support costs related to infrastructure planning, land use management, community consultation and environmental assessments that are incurred before production commences. However, Staff consider many of these expenses are recorded in other categories including the community development component of the Services to communities expenses. An assessment of these particular expenses is contained in the Services to communities chapter.

⁷⁸ See ABS catalogue number 8165.0, June 2007 to June 2011.

Staff propose to recommend the commission:

- make a separate assessment of mining regulation expenses only if the commission identifies other mining related expenditure assessments that would in total satisfy the commission's material threshold for a disability.

Fitness for purpose and reliability of survey data underlying the assessment

- 15 Western Australia said the current assessment lacks transparency and has a number of deficiencies. First, the distinction between regulation and business development expenses is open to interpretation. It says many public good activities (e.g. acquiring and disseminating geological information) serve a dual purpose and it would seem more transparent to assess all activities with a significant public good element. Second, data to support the current assessment consists of State opinions gathered through a survey about the proportions of regulation and business development expenses and the appropriate drivers. Western Australia said, apart from the moral hazard issues, States may genuinely take different views on the drivers depending on their perspective. It concluded that the commission needs to develop a sounder methodology.
- 16 Given the short time-frame for this methodology review, there is unlikely to be sufficient time to develop a new methodology for allocating services to industry expenses and assigning weights to the different drivers, consult States and collect any data needed to support a new assessment approach.
- 17 Staff accept that there may be some expenses apart from regulation expenses to which regulation disabilities should apply. The example provided by Western Australia was acquiring and disseminating geological information. Staff have recently re-examined the classification of expenses to regulation and business development functions and identified some examples of non-regulatory expenses that may relate to industry size. However, staff concluded that reclassifying these expenses from business development to regulation would not produce a materially different distribution. Furthermore, in the initial allocation of expenses to regulation and business development functions, commission staff did spilt some expenses between the two functions, recognising that some functions serve a dual purpose.
- 18 Staff do not believe there is a serious moral hazard issue associated with the survey data as suggested by Western Australia. The moral hazard risk attached to these data is no greater (and in all likelihood less) than for other State provided data used by the commission.⁷⁹ The State provided data for the 2010 Review were reviewed by commission staff to ensure similar expenses for all States received the same

⁷⁹ For example, some State provided data are used as the basis for estimating some expenses that are assessed on an APC basis e.g. native title and land rights expenses. There is a greater moral hazard risk with these data.

treatment. The ability of any one State to influence the weights is limited through the use of all State average expenses to calculate the weights.

- 19 Nevertheless, staff acknowledge that the survey data underpinning the assessment is not entirely reliable. In the 2010 Review, this led the commission to apply a low level discount (12.5%) to the weights derived from the survey. Any further discounting would reduce the proportion of expenses that are differentially assessed. Staff consider that the low level discount remains appropriate.

Staff propose to recommend the commission:

- continue to use the 2010 Review State survey results as the basis for determining expense and disability weights and continue to apply a low level discount (12.5%) to the weights.

Other issues considered and settled

- 20 Staff have also examined a number of other issues for this assessment:
- equal per capita (EPC) assessment of business development expenses
 - treatment of user charges
 - vocational education training (VET) expenses in the Services to industry category
 - regional location assessment of regulation expenses.

EPC assessment of business development expenses

- 21 No State explicitly proposed changing the EPC assessment of business development expenses in the Services to industry category but Queensland and Western Australia said there are some industry support expenses that have been classified as business development expenses that should be assessed.
- 22 Staff re-analysis of the State provided survey data from the 2010 Review identified some examples of non-regulatory expenses that are likely to be higher for mining States due to the presence of large mineral deposits within their States' borders. The main examples were geological surveys and mining industry data, but the amounts involved were not significant and staff consider that reclassifying these expenses would not produce a materially different result.
- 23 The issue of how business development expenses should be assessed was considered at length during the 2010 Review. No State has made a case for changing the treatment of business development expenses. Staff propose the appropriate treatment for these expenses is to continue to assess them on an EPC basis.

Staff propose to recommend the commission:

- continue to assess business development expenses on an EPC basis.

Treatment of user charges

- 24 User charges in this category are substantial. In 2010-11, they were \$1.5 billion or about 20% of total category expenses. About one quarter of the revenue relates to agriculture and includes agricultural levies to fund research and development (R&D), marketing and promotion, plant and animal health programs and other activities that benefit the industry. Most of the functions funded by agricultural levies are considered business development expenses which are assessed EPC. The EPC assessment of agricultural levies in the Other revenue category is consistent with the treatment of the expenses they fund. Staff propose that agricultural levies continue to be assessed on an EPC basis.
- 25 Mining user charges account for a further 15% of user charges in the category. States impose mine safety levies and other charges to cover the cost of safety services and other regulatory functions performed by the State. Since the assessment of regulation expenses recognises needs for mining regulation, and the same drivers influence the capacity of States to raise revenue from mining user charges, there is a strong case for netting mining user charges off mining expenses.
- 26 Staff propose to net mining user charges off State mining. In 2010-11, total mining user charges (mainly mining safety levies) were \$226 million. After deducting this amount, net mining expenses were \$305 million. Staff note that the assessment of mining industry regulation expenses net of user charges is less material than a gross assessment of these expenses.

Staff propose to recommend the commission:

- net off mining regulation user charges from mining industry regulation expenses.

VET expenses in the Services to industry category

- 27 The Services to industry category includes State spending on VET programs provided by organisations other than technical and further education (TAFE) institutions. A decision was made in the 2010 Review not to allocate non-TAFE VET expenses to the Post-secondary education category due to concerns around the reliability of 4-digit Government Purpose Classification (GPC) data (to which these expenses were classified). In any case, at that time, the level of spending on non-TAFE vocational training was smaller than it is now.
- 28 Since the 2010 Review, VET expenses in the Services to industry category have grown by about 65% due to the increased role of private registered training organisations

(RTOs).⁸⁰ State funded vocational training provided by private RTOs is included in the National Centre for Vocational Education and Training (NCVER) contact hours data used to assess service use in the Post-secondary education category. It would be more appropriate to move State spending on VET provided by private RTOs to Post-secondary education where needs related these expenses are being recognised.

- 29 In the current services to industry assessment, VET expenses are assessed EPC.
- 30 Staff propose that all VET expenses in the Services to industry category be moved to the Post-secondary education category. In 2011-12, this change will increase Post-secondary education expenses by \$983 million or 16%. Services to industry expenses will decrease by 14%.

Staff propose to recommend the commission:

- move all VET expenses from the Services to industry category to Post-secondary education.

Regional location assessment

- 31 In the 2010 Review, staff said the data for a regional location assessment in the Services to industry category was inconclusive. However, staff have re-considered the case for making a regional location assessment in this category. Staff observe that there are some industry regulation functions, particularly those related to agriculture and mining, that must occur where businesses are located. States with more businesses located in regional areas are likely to face additional costs.
- 32 Staff propose to apply the general regional costs factor to regulation expenses. While this would only result in a small increase in regional location needs, there is a conceptual case for making an assessment and it is practical to do so.

Staff propose to recommend the commission:

- apply the general regional cost disability to regulation expenses.

⁸⁰ Private RTOs were providing 25% of vocational training hours in 2011, compared with 12% in 2008.

PROPOSED CATEGORY STRUCTURE

33 Staff propose the following assessment structure for this category in the next review.

Table 21-1 Proposed Services to industry category structure

Component	Disability	Influence measured by disability
Service expenses	Regulation	Recognises that the difference between States in the cost of industry and other regulation is related to the size of industries, the number of businesses and State population.
	Business development	This is an EPC assessment because there is no clear basis for deciding that one State needs to spend more than any other.
	Location	Recognises the differences in the cost of providing labour and non-labour resources between States and to different areas within a State.
Other expenses	Administrative scale	Recognises the unavoidable costs each State incurs to provide the policy and administrative infrastructure necessary to provide the minimum unavoidable service, regardless of the size of the task.
	Native title and land rights	Recognises State costs of settling native title and land rights claims made under Australian Government legislation.

CHAPTER 22 – PRIORITY ISSUE MINING RELATED EXPENDITURE

PRIORITY ISSUE

- 1 One of the priority issues for the 2015 Review is to consider the treatment of mining related expenditure. In particular, the terms of reference for this review state that in undertaking its assessments the commission should:

have regard to the recommendations of the final report of the GST Distribution Review to consider the appropriate treatment of mining related expenditure (Recommendation 7.3).
- 2 Recommendation 7.3 of the GST Distribution Review final report states:

The Panel recommends that, in the terms of reference for the 2013 Update, the Commonwealth Treasurer direct the CGC to add an amount to its expenditure assessments equivalent to a 3% discount of the mining revenue assessment in order to compensate for the fact that some mining related needs of the resource States are not fully recognised. This interim assessment should remain in place until the next methodology review is completed.
- 3 The terms of reference for the 2013 Update did not include such a direction.

STATE VIEWS

- 4 New South Wales, Victoria and the ACT do not support any further changes to the assessments to recognise mining related expenditure needs. New South Wales said it is not clear what spending is not fully recognised in the commission's current assessments (including the capital assessment introduced in the 2010 Review) and it is concerned about the impact of policy decisions on mining related expenditure. Victoria says if there are any unassessed mining related expenses evidence must be produced by the advocating States to demonstrate: the extent of the expense not covered; how any associated differentials can be robustly measured without double counting or policy influence; and that the resulting impacts are material. The ACT does not support discounting of the mining revenue assessment to recognise mining related expenditure needs.
- 5 South Australia and Tasmania support an examination of the appropriate treatment of mining expenditure on a first principles basis and consistent with HFE.
- 6 Queensland, Western Australia and the Northern Territory support the assessment of mining related expenditures and consider the current assessments do not fully

recognise mining related expenditure needs. They describe direct costs (recurrent and capital) that arise from mining related activity, and opportunity costs and risks, encompassing both economic and social infrastructure. Western Australia estimates they have potentially \$2 billion of unassessed needs per year. Queensland said there are substantial costs associated with the mining industry which are not cost recovered, or only cost recovered over a long period of time. Western Australia said it is impractical and inefficient to cost recover from migrating labour and capital, and full cost recovery leads to higher costs for the economy in the long-run.

- 7 Queensland and Western Australia support a discount to the mining revenue assessment to address deficiencies in the current expenditure assessments. Queensland said a discount would recognise the direct link between expenditure to support mining industry development and increased royalty capacity, allow recognition of difficult to quantify costs (e.g. opportunity cost and risk), and be simpler and less volatile than a direct assessment of expenditure needs. Western Australia said a discount (25% to 50%) would recognise mining related expenditure needs that are particularly difficult to assess, recognise intergenerational risks from future changes to HFE and provide adequate policy neutrality.
- 8 The Northern Territory considers discounting the mining revenue assessment as a proxy for assessing expenditure needs is less robust and overly subjective due to the level of judgement the commission would have to employ. The Northern Territory said it would prefer the commission to develop a direct assessment of mining related economic development expenditure given the differential influences on costs of State service provision in resource States. It said any additional complexity associated with this type of assessment would be acceptable. The Northern Territory said the onus was on the States to demonstrate that the costs involved were material. It said the assessment of mining related expenditure needs should take into account the stage of development because most of the capital support is likely to be required at the early stages of mining development rather than when the mines are well established.
- 9 State views on the specific assessment issues addressed in this chapter are outlined in the relevant sections below while State views on assessment issues addressed in other chapters are outlined in the relevant chapter.

MINING RELATED EXPENDITURE

- 10 For the purposes of the 2015 Review, staff consider that mining related expenditure should be limited to the expenditure directly associated with the development and management of mining activities. While staff understand that States with relatively large resource sectors have been experiencing rapid population growth (including in regional and remote towns) any expenditure on services and associated social infrastructure is already recognised in the Commission's 2010 Review methodology.

For example, the impact of mining development on State population growth and the associated needs for more schools and hospitals, as well as more teachers and hospital services, is recognised through the expenditure assessments. This is because, for example, State spending on schools is determined by the number and location of school children rather than the industry in which their parents are employed.

- 11 Some States have consistently claimed that there are additional costs which are not recognised. The unassessed or unrecognised costs described by the major resource States fall into three categories:
 - unassessed needs arising from State expenditure on mining services and infrastructure
 - unassessed needs arising from indirect costs and unmet need, for example, opportunity cost and risk
 - over-equalisation of mining due to the commission's failure to recognise the contribution of State policies (past and current) to the development of mining revenue bases.⁸¹
- 12 As in past reviews we consider that these concerns should be examined using the assessment framework established by the commission and used for all other assessments. We do not consider that mining expenditures should be accorded special treatment compared to, for example, State spending on agriculture, manufacturing or service industries. Each of these sectors could have a different impact on fiscal capacities.
- 13 The commission already recognises that States with large farming sectors compared to their populations incur above average costs. Similarly, States with disproportionately large mining sectors might also bear disproportionate costs. The conceptual case for such a disability has been long recognised. The challenge is to identify what States in total spend on their mining industries and devise a way of assessing (identifying the drivers for) each State's share of that expenditure.
- 14 To do this, the commission must be able to identify disabilities and expenses to apply them to. It derives disabilities using the assessment guidelines (sound conceptual case, evidence of differences between States and reliable data upon which to build a material assessment), while the expenses are based on ABS government finance statistics (GFS). Since all State expenditures are currently included in the equalisation process, State spending on mining industry related services and infrastructure is currently captured. The issue becomes whether the appropriate disabilities are being applied to this spending.

⁸¹ This argument extends to all tax bases. Mining States say that a discount to revenue raising capacity is the appropriate way to address this issue.

ISSUES

- 15 Some of the unassessed mining related costs identified by the resource States relate to current assessments. Staff have examined these issues and provided a preliminary response in the relevant chapters of this paper to the matters raised. The State issues include that:
- actual capital costs should be used instead of the recurrent cost disability proxy to measure infrastructure costs (see Infrastructure chapter)
 - the infrastructure assessments should recognise the impact of intrastate migration on State infrastructure provision (see Infrastructure chapter)
 - inadequate recognition of road maintenance and construction for the direct benefit of the mining industry (see Roads and Infrastructure chapters)
 - the very high regional and remote costs in Western Australia should be recognised in the commission's expenditure assessments (see Regional costs and Interstate wages chapters)
 - there should be explicit recognition of mining industry regulation costs (see Services to industry chapter)
 - there is inadequate recognition of support for local governments and community amenities (see Services to communities chapter).
- 16 This chapter will respond to some of the other issues raised by States. They are:
- regulation and administrative costs linked to major infrastructure projects
 - the impact of Fly-in/fly-out (FIFO) and drive in/drive out (DIDO) workers on services and infrastructure
 - opportunity cost and risk linked to mining related activity and economic development more generally
 - recognition of the contribution of past and present State policies to the development of mining revenue bases, for example, the North West Shelf project.

DIRECT EXPENDITURES

- 17 The Northern Territory said a way to identify the types of direct expenditures that are not currently assessed would be to use an avoidable cost approach which identifies expenditure on government services and infrastructure that would not have been incurred in the absence of private investment in mining and energy activities. Queensland supports the commission developing a data request asking for information on State policies and mining related expenditures so the issues raised by the major resource States can be fully examined in a consistent way.

- 18 At this stage staff do not propose to send a comprehensive data request to the States on mining related costs but we have asked States to provide input on a number of issues discussed
- 19 Where States have already identified potential gaps, staff have examined the nature of the costs and the factors that influence them. In a number of areas we are contemplating additional assessments (for example, regulation and administrative costs linked to major infrastructure projects and FIFO workers) or changes to existing assessments (for example, roads, regional location costs, mining industry regulation).

Regulation and administrative costs linked to major infrastructure projects

- 20 Queensland said the current assessments do not recognise all the costs associated with support for the mining industry, including the additional burden associated with having a major industry with complex social, economic and environmental interactions with the community. It said these additional costs are not reflected in a broad measure of the level of business activity, such as that used to assess business regulation expenses.
- 21 Some of the costs Queensland alludes to include spending on development assessments and approvals for major resource and other infrastructure projects (including zoning and land use, environmental impact assessment processes and community consultation on heritage, social, cultural and Indigenous issues) and strategic infrastructure planning.⁸² It is unclear where these expenses are recorded in Australian Bureau of Statistics (ABS) government finance statistics (GFS). Some may be classified as community development expenses in the Services to communities category, or they may be classified to the function to which they relate (for example, road or other transport expenses). Staff consider the existing recurrent service use disabilities may not capture all needs for State spending to regulate and facilitate major infrastructure projects, and States experiencing high levels of public and private sector investment (including in large mining projects) are likely to face higher costs.
- 22 Staff intend to examine the practicality and materiality of making an assessment for these expenses, possibly using level of investment as the broad indicator of need. A data request has been sent to States requesting data on the how much they spend on these functions and where they are recorded in GFS. It has been difficult to define the scope of these expenses and staff have some concerns about how easy it will be for States to identify the appropriate expenses. We consider any revenue arising from major project assessment and approval processes should also be identified and netted off State expenses before making an assessment.

⁸² Hereafter referred to simply as infrastructure development expenses.

- 23 Staff acknowledge the level of investment would be a lagged indicator and may not pick up any additional complexity associated with mining related infrastructure projects, although the very large scale of many mining projects may reflect the additional complexity. We invite States to suggest an appropriate leading indicator or driver for assessing these expenses, where they can be identified.

State views are sought on:

- the practicality of identifying these expenses in GFS
- an appropriate indicator or driver for assessing these expenses.

Fly-in/fly-out and drive in/drive out workers

- 24 Staff observe that resource companies are increasingly using fly-in fly-out (FIFO) or drive-in drive-out (DIDO)⁸³ arrangements to source workers and there is evidence that the growing use of these types of work practices is placing pressure on the communities where these people usually live ('fly-out' communities) and where they work ('fly-in communities').
- 25 In 2013, the House of Representatives Standing Committee on Regional Australia released a report on *Fly-In, Fly-Out' and 'Drive-In, Drive-Out' Workforce Practices in Regional Australia*.⁸⁴ The committee identified the social impacts on 'fly-in' communities of FIFO work practices and pressures on a range of local and State government services including housing, health, police, roads, landfill, water, sewerage and waste. It also identified issues for workers and their families in 'fly-out' communities including relationship stress and breakdown, excessive alcohol and drug use, depression and violence. However, overall, the committee concluded there is no nationally consistent data on the scope, effect and cost of FIFO/DIDO work practices.⁸⁵
- 26 Staff consider that the growing use of FIFO arrangements might lead to some unassessed State expenses, or expenses attributed to the wrong State. The base for commission calculations is where people reside, on the assumption that services are used close to place of usual residence. If the growth of FIFO weakens the validity of this assumption in a material way then assessments should conceptually be modified.
- 27 This could occur in several ways. People could be recorded as residents in one State but work and use services in another (the cross border effect), or reside in one part of a State, but work and use services in another part of a State, and the cost of service

⁸³ In this paper FIFO will refer collectively to FIFO, DIDO and bus-in bus-out (BIBO) workers.

⁸⁴ The House of Representatives Standing Committee on Regional Australia, 2013. *Cancer of the bush or salvation for our cities? Fly-In, Fly-Out' and 'Drive-In, Drive-Out' Workforce Practices in Regional Australia*. Chapter 3 and related submissions.

⁸⁵ *ibid*, The House Standing Committee on Regional Australia., 2013, page 4.

provision between these locations differs markedly. At any point in time, the population in resource States with large FIFO workforces is likely to be more remote on average than would be implied by the usual residence of its population. Staff consider this is the most likely source of any additional cost of FIFO workers.

- 28 Staff have attempted to measure one aspect of the potential impact of FIFO workers on service use. In the regional costs assessment, we have adjusted the distribution of the population to reflect the difference between place of enumeration and place of usual residence. For Western Australia, this increased the number of people in very remote areas by 40%. Western Australia said the main services affected by FIFO workers in ‘fly-in’ communities are police and health. On that basis, the adjustment is not material, moving less than \$10 per capita to Western Australia.^{86 87}
- 29 However FIFO workers could have other impacts, which in total warrant an adjustment.
- 30 Western Australia estimate that the unrecognised needs related to FIFO workers are \$100 million per year.⁸⁸ The concept underlying Western Australia’s estimate is that while these workers would generally be regarded as having medium/high income or socio-economic status (SES), their demands on State government services could be more akin to low income or SES workers. Western Australia estimates the additional cost of each FIFO worker is \$2,528. Most of this allowance arises from services used by FIFO workers and their families in the ‘fly-out’ communities. Western Australia estimate there are 55,150 FIFO workers in Western Australia and 150,000 nationally.
- 31 We understand that the Western Australian proposal is that FIFO workers should be treated as having a service use profile higher than that suggested by their socio-demographic characteristics. The conceptual case is based on anecdotal evidence of the social consequences of FIFO work practices on workers and their families.
- 32 While staff are aware of anecdotal evidence that FIFO workers might impose higher costs when “off-duty”, we are also aware of anecdotal evidence that while “on duty” they impose low costs. It is difficult to decide where the balance lies especially when compared to the costs of a non FIFO worker. The type of data that might assist the commission in evaluating Western Australia’s conceptual case are nationally consistent data on the number of FIFO workers who usually reside in each State, the

⁸⁶ This approach assumes that the majority of FIFO workers usually live in the State where they are employed as FIFO workers. The *WA State Growth Outlook 2013* report prepared by PricewaterhouseCoopers from the Chamber of Minerals and Energy of Western Australia estimated that 11% of the FIFO workforce in Western Australia is from interstate. It also assumes that the socio-demographic profile of FIFO workers is the same as the resident population which is about 1/3 Indigenous, and all non-residents in remote Western Australia on census night are FIFO workers.

⁸⁷ The measure of rural road use in the commission’s road maintenance and investment assessments should include the impact of FIFO workers.

⁸⁸ The detailed calculation of unrecognised FIFO worker expense needs is shown in Western Australia’s submission to the CGC 2015 Methodology Review, page 129.

characteristics of FIFO workers, and empirical evidence that FIFO workers use State services more intensively than non-FIFO workers.⁸⁹

- 33 Queensland said the Commission should investigate potential unrecognised needs arising from the duplication of infrastructure and service provision due to FIFO/DIDO workers. It suggested the commission collect data on mining towns including the number of FIFO/DIDO workers.
- 34 We are unsure how significant the duplication issue, of itself, might be in practice. The current assessments provide States with the capacity to provide an average annual service level, say health care, to each resident. Leaving aside regional cost issues, States can provide those services anywhere in the State. There may be a stronger case for duplication of infrastructure, but again FIFO workers do not appear to raise overall service use, just where the service is consumed and States can adjust the location of infrastructure to match service use. We would seek further evidence of how duplication costs arise in practice and their scale.
- 35 South Australia supports the examination of whether service populations in some States are larger than resident populations, and whether rural roads and community services assessments should be amended to reflect the impact of FIFO workforces.
- 36 Overall there could be a case for recognising the impact of FIFO workers, but staff seek further evidence of their scale and the net cost impact of these workers, to consider what, if any, changes should be made to incorporate the influence into assessments.

States are asked to provide:

- data on the number and socio-demographic characteristics of FIFO workers and empirical evidence that FIFO workers use State services more intensively than non-FIFO workers
- evidence of how duplication costs arise in practice and their scale.

OPPORTUNITY COST AND RISK

- 37 Queensland and Western Australia said the expenditure assessments should recognise the opportunity cost and risk associated with mining related activity or economic development more generally. Queensland describes the opportunity cost in terms of spending that it must forego in order to fund mining related services and infrastructure, while Western Australia describes opportunity costs in terms of proportionally higher costs of initially under-utilised capital.

⁸⁹ Apart from income the relevant characteristics include educational attainment, occupation, housing situation, age, marital status and family size.

- 38 Queensland said there is a real opportunity cost for governments in undertaking the initial capital expenditure for projects linked to mining activity. Governments face budget constraints and spending on mining related infrastructure means less infrastructure spending in other areas, including social infrastructure such as hospitals and schools. For many projects directly related to assisting mining development, the expected timeframes for cost recovery are extremely long, and the opportunity cost of this use of limited funds is a real cost to government and the community. Queensland said there is risk that infrastructure put in place to support the mining industry may be under-utilised in the future due to the inherent uncertainties associated with mining industry, and this risk must be borne by government. It said the commission cannot ignore these intangible or unquantifiable costs. They provide part of the justification of a discount to the mining revenue assessment.
- 39 Western Australia said the expenditure assessments should recognise that it is more cost effective to provide infrastructure in-advance to capture economies of scale but there is an opportunity cost that arises because capital is initially under-utilised. Western Australia said opportunity cost is applicable to all tax funded and user charged growth infrastructure, and recovering the opportunity cost of under-utilised capital from migrating labour and capital is often impractical, creates inefficiency and where attempted increases costs for the economy in the long-run. Western Australia also said there is a risk of inefficient utilisation, due to technological changes, population movements and variance between economic forecasts and outcomes. It said States with more growth face proportionately higher risk, and the cost is disproportionately higher if higher growth is accompanied by greater economic volatility. Western Australia estimates the cost of under-utilisation of capital and inefficient utilisation of capital is \$870 million per year.
- 40 The issues raised by Western Australia and Queensland in relation to mining infrastructure, and similar issues raised in past reviews are complex, and providing an appropriate recognition of any differences in fiscal capacities they might generate raises complex assessment issues.
- 41 Staff have identified some specific issues below along with how we are attempting to respond. More generally we would welcome views of other States on the issues raised in State submissions.
- 42 Mining related economic infrastructure appears to be the main subject of these concerns. To gauge the relative importance of its provision staff would welcome evidence of what resource States are actually providing because this goes to the issue of materiality, as does evidence of how that economic infrastructure differs in nature from the economic infrastructure provided by other States in response to their industry structures. For example, is it different to urban transit infrastructure for service based economies? Staff would value further State advice on this issue.

Long cost recovery horizons

- 43 Staff recognise that if assets in one State have on average longer cost recovery horizons than in other States, this can have a direct impact on relative fiscal capacities. We seek information on the relative importance of the infrastructure to which this potential disability applies.
- 44 It could be that States view cost recovery narrowly, for example direct recovery through user charges, which would appear to limit the range of infrastructure to that provided by State public non-financial corporations (PNFCs) like ports or electricity supply, or it could be that they see it broadly in terms of a larger overall tax base, so that it could encompass infrastructure like roads.
- 45 If it is related to the narrower category we seek evidence of how much longer cost recovery horizons are for mining related infrastructure than the average. We also seek information on how much infrastructure is provided by States and by mining companies in different States, and for similar infrastructure more generally in non-resource States, so that staff can assess how material such a factor might be.
- 46 If States are talking of the broader cost recovery, staff consider it likely that it will be impractical to assess differences in the speed of cost recovery, but would welcome State views and advice which would enable us to form a view on materiality.
- 47 We consider that the issue of under-utilization of assets is similar to that of long cost recovery horizons.

Pre-emptive Investment

- 48 Western Australia said States provide social and economic infrastructure in advance of population growth and the equalisation process should recognise the costs associated with in-advance provision. It said faster growing States face proportionately more of these (opportunity) costs.
- 49 Staff expect that all States anticipate population growth when undertaking infrastructure investment and that on average at any time the average infrastructure investment provides some capacity for population growth.
- 50 We also observe that in general, States with fast population growth in a year have recorded fast growth in the recent past. While relative growth rates do change they do so slowly.
- 51 The current infrastructure assessment, being based on recent observed relative population growth rates, implicitly anticipates the pattern of future relative population growth rates. As such some of the concerns seem to be addressed. It could be that States seek a more direct incorporation of projected future growth rates (for example by backcasting those into our assessment years) into the assessments so that GST revenue is allocated to where future population growth is

fastest. We are unsure whether a change to the current assessment would better reflect average State policy and seek guidance on this point.

- 52 In its submission, Western Australia acknowledged its calculation is based on forecast population growth, and an alternative ‘historical’ approach (that is, assessing a standardised level of in-advance provision in existing infrastructure) may be possible. Staff would be interested in seeing how an historical approach would be operationalised.
- 53 States have also advanced a view that if the GST distribution were changed, GST revenue could be directed to States which would then have additional capacity to invest in infrastructure in such a way that overall economic conditions would be improved. Some States would of course have a lower capacity.
- 54 Staff understand this argument but consider that it addresses an issue other than fiscal equalisation. The impact of implementing such an approach appears to be that States would have an unequal capacity to deliver services.

Risk or inefficient utilisation of capital

- 55 The major resource States say they face relatively more risk of inefficient utilisation of capital over time. For example, Western Australia assumes that nationally, 5% of capital is lost through inefficient utilisation over time and that for Western Australia this amount is 10%. It attributes the higher risk to greater exposure to shifts in market conditions and greater variability in population growth.
- 56 Staff have not been able to identify any reliable or nationally consistent datasets that would allow the commission to measure the cost of inefficient capital utilisation linked to structural change for all States. This is the type of information that might assist the commission in determining the materiality of an assessment of these costs.

State views are sought on:

- the average cost recovery period for different types of infrastructure to allow the commission to assess any potential impacts on relative fiscal capacities
- how to determine the average State policy on the timing of infrastructure provision
- any reliable or nationally consistent datasets that would allow the commission to measure the cost of inefficient capital utilisation linked to structural change for all States to allow the commission to assess any potential impacts on relative fiscal capacities.

**RECOGNISING THE IMPACT OF PAST AND CURRENT STATE MINING INDUSTRY
DEVELOPMENT POLICIES ON MINING REVENUE BASES**

- 57 The major resource States said the commission should recognise the contribution of past and current State policies to the development of mining revenue bases by discounting mining revenue capacity. In particular, Western Australia said the equalisation of North West Shelf royalties fails to recognise the costs incurred by Western Australia in establishing this project, and that a 25% discount to the mining assessment would be an appropriate recognition of the influence of these costs. Queensland said if the commission considers expenditure on services and infrastructure to develop the mining industry a policy choice, then it follows that any revenue arising from this spending is also a policy decision and should not be fully assessed.
- 58 The commission has for some time recognised that States face differential fiscal challenges in developing their economies and that these would be influenced by their resource endowments. The practical difficulties have been deciding how different State circumstances would affect what a State using average policy would do; and because States themselves have been unable to quantify their economic development expenditures, deciding if a material assessment could be constructed.
- 59 The commission accepts in principle that where a State's unique actions change the base on which revenues are assessed, that the impact of that unique policy should be excluded from the revenue base.
- 60 In considering this issue, staff face the question of how much of say, Western Australia's higher mining royalty base, is the result of its unique policy, and how much is the result of its innate mineral endowment. Deciding this is difficult and we suspect that if asked, other States would say that if they had the mineralisation in their States, they would have followed similar developmental policies. If so, then on one reading, there are no grounds for a discount.
- 61 Further, it would only be appropriate to consider a discount if a similar approach were taken for other tax bases, and to evaluate for example what, if any, unique State policies contributed to the development of financial centres in New South Wales and Victoria.
- 62 Staff also have a more general concern. The commission is asked to advise on a GST allocation to equalise fiscal capacities for a real world reason — so that States have the capacity to provide average service levels to their residents in the present. 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.

- 63 However it is still the case that if some States bear higher costs due to the same underlying conditions and which generate higher tax bases, those costs should be recognised in the allocation process. Staff would welcome State evidence of what they differentially spend in this way so that a material assessment can be constructed as part of the 2015 Review.

State views are sought on:

- how the commission could consistently identify and measure the influence of unique State policy on their tax bases.

CONCLUSION

- 64 Staff are convinced that the resource States face unique challenges because of their mineral endowments, and that other States face no less unique challenges because they do not. We understand the issues that resource States have advanced which illustrate aspects of the costs they face. Staff are however left with the following challenge: how do those issues translate into differences in today's fiscal capacities, given the economic development issues faced by all States and, perhaps the most challenging, how material are the differences they produce?
- 65 We think that some of the avenues for changing methodologies identified by States show more promise than others. For example, exploring how population growth rate differences expected in the application year should best be reflected in our assessments, or making allowance for FIFO workers. We ask States for their continuing constructive engagement in this difficult area.

CHAPTER 23 – OTHER EXPENSES

2010 REVIEW APPROACH

- 1 The Other expenses category comprised those services and transactions not separately examined and assessed in other expense categories.⁹⁰ It included:
 - general public services — centrally provided services, including State legislatures and central administrative agencies that support State service delivery agencies and supervision of local government, general research and other administrative functions including GST administration
 - other services not assessed elsewhere — expenses for recreation and culture (such as libraries, public halls, art and sport facilities, national parks), public safety services other than those provided by police services (such as emergency services and fire protection), natural disaster relief, communications and pipelines
 - sundry purposes and transactions — public debt transactions (debt charges and interest charges on unfunded superannuation) and general purpose inter-government transactions (grants, advances or other inter-government transactions that cannot be allocated to purposes)
 - superannuation for State government employees engaged in providing these services.
- 2 The assessment recognised that State populations were the main driver of differences in these expenses across States. In addition, it recognised that:
 - the expenses on general public services were heavily affected by diseconomies of scale, interstate wage and non-wage cost differences, and to a lesser extent by regional cost differences⁹¹, national capital influences (largely planning expenses) and Commonwealth legislation governing native title and land rights
 - expenses on public safety, culture and recreation, national parks and wildlife services, pipeline and communication expenses were affected by diseconomies of scale, regional locational cost differences and Commonwealth legislation governing native title and land rights
 - natural disaster expenses of States reflected what they needed to spend
 - expenses on the ACT library and sportsgrounds were increased because of cross-border use by New South Wales residents.

⁹⁰ A balancing item was also included in this category to ensure the total expenses reflected in the adjusted budget equalled the total expenses included in the ABS government finance statistics. It mainly included balancing amounts for user charges netted off expenses as well as Commonwealth payments netted off expenses. This item had no impact on the relativities.

⁹¹ Half of the general public services and general purpose intergovernmental transactions were considered to be affected by regional cost differences.

- 3 Commonwealth natural disaster relief payments to the States under the Natural Disaster Relief and Recovery Arrangements (NDRRA) were treated as having no impact on the relativities. They were netted off State expenses claimed under the NDRRA.

ISSUES AND ANALYSIS

- 4 The major issues to be considered for this assessment are:
 - the natural disasters assessment
 - the assessment for national parks and wildlife services.
- 5 Most states did not comment on the Other expenses assessment. However, Western Australia suggested that economic and population growth affect State spending on national parks and wildlife.

Natural disaster relief assessment

- 6 In the 2013 Update, the commission decided that the findings from a review of State insurance arrangements undertaken by the Commonwealth Department of Finance and Deregulation (DoFD) under the 2011 NDRRA Determination allowed it to retain an actual per capita (APC) assessment. Conceptually, for an APC assessment to be retained, all State expenses should be reported on a comparable basis. They were not and adjustments should have been made:
 - to Tasmania's and the Northern Territory's reported natural disaster expenses to add imputed insurance premiums and insurance receipts for non-road assets and
 - to Victoria's and the ACT's expenses to remove insurance premiums and insurance receipts for road assets.

The commission decided not to make adjustments until evidence were available to make them reliably and to check their materiality.

- 7 We will consider this issue again in the course of the 2014 Update. Tasmania and the Northern Territory have sought extensions to the November 2012 request from the then Minister for Emergency Management that they seek market quotations and perform cost-benefit analyses to demonstrate what appropriate insurance arrangements would be. It remains to be seen whether we can get DoFD's appraisal of the 2 States' submissions in time for 2014 Update.

National parks and wildlife services

- 8 While a specific assessment of national parks and wildlife expenses was made in the 2004 Review, no such assessment was made in the 2010 Review on 2 accounts:

- the areas declared national parks or reserves by States and the proximity of urban development to parks were subject to significant policy differences between States
 - sufficiently reliable and robust measures of disability relating to visitor impact, conservation needs and impact of nearby urban populations could not be found.
- 9 There have however been improvements in the comparability of national parks and reserves in over recent years. Under the *Strategy for the National Reserve System 2009-2030*, the State and Australian Governments have adopted international standards for the definition of a protected area and management categories used by the World Conservation Union (IUCN).
- 10 In addition, all jurisdictions have agreed on targets for a National Reserve System (NRS), including a target of 17% of the continent to be protected as part of the NRS. In building the NRS, priority is being given to those of the 89 Australian bioregions which are under-represented in the NRS (less than 10% protected). All States have increased the number and size of protected areas since the NRS has been in place.
- 11 Table 23-1 shows the number and size of protected areas in each State in 2010. It is evident that some States — notably New South Wales and Queensland — have less than the national 17% target protected while others have more — notably Tasmania and the ACT. The most rapid growth in protected area over the past 15 years has been in New South Wales, Queensland and the Northern Territory; States with below average protected areas.

Table 23-1 Terrestrial protected areas in Australia by State, 2010

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Number of areas	867	2 897	1 073	1562	1 946	1 202	45	105	9 697
% increase since 1995	70	11	146	32	447	172	350	21	72
Total size (ha '000)	7 082	3 992	11 505	35 643	27 247	2 845	130	14 795	103 239
% increase since 1995	66	17	73	32	30	31	5	401	73
Average size (ha)	8 168	1 378	10 722	22 819	14 001	2 367	2 878	140 909	10 646
Jurisdiction Area (ha '000)	80 121	22 754	172 974	252 701	98 422	6 840	236	134 779	768 827
Jurisdiction Protected (%)	8.8	17.5	6.7	14.1	27.7	41.6	54.9	11.0	13.4

Source: Collaborative Australian Protected Area Database (CAPAD),
<http://www.environment.gov.au/parks/nrs/science/capad/>.

- 12 It is clear that, despite the national guidelines on the establishment of designated protected areas, significant differences between the States in the number and area

protected remain. The historical development of protected areas will continue to mean that some States will have considerably larger proportions of their jurisdictions protected. While it is difficult to attribute all these differences to State policies, undoubtedly, these have had a major impact. The Commonwealth also has had a major influence on the size of areas protected, particularly in Tasmania and the ACT.

- 13 In the 2004 Review, the Commission took into account a number of disabilities associated with national parks and wildlife services expenses. The data to measure these disabilities reliably are still not available.
- 14 In its submission, Western Australia raised the issue of the extent to which State spending on national parks and wildlife is affected by economic and population growth. However, it is not clear what evidence and data are available to establish a conceptual case, to appropriately identify the relevant expenses or to measure the impact of these influences.
- 15 In conclusion, we do not think it is possible develop a reliable assessment of national parks and wildlife services needs given the uncertainties surrounding the policy influences on the number and size of national parks and the difficulty in obtaining reliable data to measure relative cost influences. At this stage, we therefore propose that these expenses continue to be included as part of the services expenses component with only cross-border and location effects taken into account.

Staff propose to recommend the commission:

- retain the current assessment of other expenses for the next review, amended if required for State natural disaster expenses.

PROPOSED CATEGORY STRUCTURE

- 16 Staff propose the following assessment structure for this category in the next review.

Table 23-2 Proposed Other expenses category structure

Component	Disability	Influence measured by disability
Service expenses (general public services, national parks, etc.)	Cross-border and location	Recognises the differences in the cost of providing labour resources between States and to different areas within a State, and the cost to the ACT of providing services to people who are New South Wales residents.
Other expenses	Administrative scale	Recognises the unavoidable costs each State incurs to provide the policy and administrative infrastructure necessary to provide the minimum unavoidable service, regardless of the size of the task.
	National capital	Recognises the costs to the ACT arising because of Canberra's status as the national capital and seat of government.
	Native title and land rights	Recognises State costs of settling native title and land rights claims made under Australian Government legislation.
	Natural disasters	Recognises State costs of natural disaster relief. These are claims made under the Australian Government's natural disaster relief arrangements. Australian Government assistance is not included.

CHAPTER 24 – INFRASTRUCTURE

2010 REVIEW APPROACH

- 1 The infrastructure assessments allow for the impact on State fiscal capacities of the infrastructure (buildings, equipment) States need to provide services. The infrastructure assessments are:
 - the Depreciation assessment, which allows for the impact on State fiscal capacities of the existing infrastructure used each year
 - the Investment assessment, which allows for the impact on fiscal capacities of the need to acquire extra infrastructure each year. Investment is defined as total capital spending less replacement spending (proxied by depreciation).

Investment assessment

- 2 The Investment assessment estimates the amount each State would spend in a year to acquire the extra infrastructure needed to provide the average services to its growing and changing population and increase its per capita infrastructure stock by the average amount.
- 3 A State's assessed investment is the amount it would spend if it is to finish the year with the average per capita stock of infrastructure, adjusted for its disabilities, assuming it started the year in a similar position. It is calculated using the formula in Box 1.

Box 1 Calculation of assessed investment

$$\text{Assessed Investment} = \left\{ \left[\left(\frac{K_1}{P_1} \right) p_{i1} \delta_{i1}^u \right] - \left[\left(\frac{K_0}{P_0} \right) p_{i0} \delta_{i0}^u \right] \right\} \times \delta_{i1}^c$$

Where: δ_{i1}^u and δ_{i0}^u are the disability factors affecting the quantity of infrastructure required by State i at the end and the start of the year

δ_{i1}^c is the expense cost disability factors for State i at the end of the year

p_{i1} and p_{i0} are the populations of State i at the end and the start of the year

K is the Australian total stock of infrastructure

P is the Australian population

- 4 The calculation allows for the effects of:
 - the State's population growth on the quantity of infrastructure it requires to provide the average services — other things equal, each person in the State at the start, and the end, of the year is assumed to require the average per capita infrastructure

- changes over the year in demographic and other factors affecting the per capita quantity of infrastructure a State requires to provide average services
 - interstate differences in the costs per unit of infrastructure.
- 5 Factors affecting the quantity of infrastructure required were derived from the service use disabilities assessed for each recurrent expense category. The aggregate quantity of infrastructure disability was derived by weighting the disabilities for each service by the service's proportion of depreciation expenses. See Table 24-1.

Table 24-1 2010 Review Investment disabilities

Disability	Influence measured by disability	Calculation
Quantity of infrastructure (also called capital stock)	This disability recognises the impact of service use on the quantity of infrastructure each State requires to provide the average level of services to its population, assuming it follows the average policies on how services are provided (called assessed stock). The calculations allow for the effects of each State's population characteristics on the quantity of infrastructure it requires. For example, higher proportions of students in a population generally lead to a greater need for schools.	<p>It is a composite of all expense use disabilities, weighted using depreciation proportions.</p> <p>The disabilities for roads and other services are assessed separately. The roads capital stock factor includes a national priorities disability plus recurrent road use and length disabilities (weighted by their effect on construction costs).</p> <p>The composite factors are discounted by 12.5% (as not all expense disabilities affect infrastructure) and smoothed using a 3 year moving average.</p>
Cost	It adjusts the assessed stock for factors affecting the unit cost of infrastructure. For example, higher wages usually lead to higher costs for specific units of infrastructure.	It is a composite of location disabilities, weighted using investment proportions by category.

Source: Commission calculation and decisions.

- 6 Two adjustments were made to reflect the realities of infrastructure provision:
- the recurrent disabilities were discounted by 12.5% because some do not affect the quantity of infrastructure required to provide services
 - the disabilities were smoothed by averaging them over 3 years because infrastructure stocks do not change immediately in response to year to year changes in the demand for the services, and to reduce volatility.
- 7 Investment needs for roads were assessed as a separate component because the commission considered different factors affected road maintenance and investment.
- 8 State investment in land was also assessed separately using an EPC assessment.

- 9 Investment by State corporations providing housing, transport, water, port and power was not reflected in the assessment. The main effects of State corporations on State fiscal capacities were recognised in the Net lending assessment.

Depreciation assessment

- 10 Every year, States provide for the replacement of the infrastructure they use in delivering services. Those provisions are recorded as depreciation expenses. The 2010 Review Depreciation assessment covered the depreciation of general government agencies. It excluded depreciation on the assets of State corporations.
- 11 The depreciation expenses States would incur under average policies are estimated by adjusting average per capita depreciation expenses for interstate differences in:
- the stock of infrastructure required to provide the average level of services
 - the per unit cost of that infrastructure.
- 12 The quantity of infrastructure disabilities were similar to those applied in the Investment assessment.

THE SIMPLIFIED AND INTEGRATED FRAMEWORK AND HOLDING COST APPROACHES

- 13 The GST Review suggested the commission consider an alternative framework which it said could be simpler, could lead to less volatility in the GST distribution and could better recognise the capital requirements of PTEs.
- 14 The GST Review approach involves moving from the existing direct assessment of capital stock requirements and the investment necessary to achieve them to an assessment based on an upfront assessment of the effects of population growth and the holding costs of infrastructure. The GST Review said its approach represents a return to an operating statement framework, but it is equivalent to equalising net worth and remains in the net lending statement framework.
- 15 States had differing views on the merits of the simplified and integrated framework. Several States also said the commission should replace the existing capital assessments with ones based on a holding cost approach because it would be simpler, better reflect what States do and reduce the volatility in GST shares.
- 16 As noted in staff discussion paper 2013-06S *Implementation and methodological issues*, we are not convinced the simplified and integrated framework or other holding cost approaches offer advantages which warrant moving from the current approach. This is especially so since the commission proposes to include housing and urban transport corporations in the scope of its calculations.

ISSUES AND ANALYSIS

- 17 This paper addresses the following aspects of the current infrastructure assessments:
- apparent double counting between investment and depreciation
 - housing and urban transport capital assessments
 - disabilities
 - the impact of population growth
 - use of recurrent disabilities
 - capital specific cost disabilities and economic development
 - combining recurrent disabilities
 - roads investment
 - a simplified depreciation presentation.

Double counting between investment and depreciation

- 18 Tasmania and the ACT noted the GST Review said the investment and depreciation assessments appear to involve a double count because ‘new’ investment in one year leads to depreciation expenses over the life of the assets. They said the issue should be examined. Queensland said there was no double counting as the Investment and Depreciation assessments measure conceptually different effects.
- 19 Every year, State budgets record their spending on the gross acquisition of non-financial assets. This includes their depreciation expenses plus their net spending on acquiring non-financial assets. These figures align with the GFS concepts of gross fixed asset formation, depreciation and net acquisition of non-financial assets.
- 20 The Investment assessment covers State spending on the acquisition of new assets which increase assets stocks. The Depreciation assessment covers spending on the replacement of these and other existing assets. Together those two assessments cover total expenditure in a year on non-financial assets. Omitting one or other of them would omit part of State infrastructure spending.
- 21 The Investment and Depreciation assessments are driven by different factors.
- The Investment assessment is driven by factors which change the level of infrastructure required — population growth, changes in other factors affecting capital stock requirements and changes in the average capital stock per capita.
 - The Depreciation assessment is driven by the size of the capital stock at a point of time and the expected useful life of assets, as reflected in the average depreciation rate.
- 22 The Depreciation and Investment assessments do not involve double counting of the expenditure or the underlying disabilities.

State views are sought on:

- whether an alternative presentation based on gross capital expenditure would make that clearer. To allow for the different factors affecting investment and depreciation, an alternative presentation would include two components.

Housing and urban transport capital assessments

- 23 Commission position paper 2013-05 *Equalisation objectives and supporting principles* said the commission proposes to include the activities of housing and urban transport corporations in the scope of its assessments because it considers they are akin to general government activities.
- 24 This means the investment associated with housing and urban transport services will be included in the assessments. More specifically, the relevant infrastructure stocks and investment will be included in the Investment assessment; disabilities affecting housing and urban transport infrastructure will be assessed; net financial assets used in the Net lending assessment will be adjusted to exclude non-financial assets of the relevant PNFCs; and depreciation will be included in the Depreciation assessment⁹².

Disabilities

The impact of population growth

- 25 In the 2010 Review, interstate differences in population growth rates were considered to have major effects on:
- State requirements for infrastructure — States with above average growth rates were considered to need above average investment per capita to provide the average standard of services under the average policies
 - State requirements for financial assets — States with above average growth rates were considered to need above average net lending if they were to finish each year with the average net financial assets per capita and the average capacity to earn interest and dividend revenue from the average revenue effort.
- 26 New South Wales, Victoria, Tasmania and the ACT said population growth is not a good indicator of the need for investment in a year, or there is no direct link between population growth and investment. They based their views on observations that: investment is lumpy and does not respond instantly to population growth; the need for some infrastructure such as parliament houses does not grow proportionately with population; and population growth also has benefits that should be recognised.
- 27 Queensland and Western Australia were comfortable with most aspects of the assessment but said population growth may understate the need to invest in new roads and other facilities to support development. Their submissions indicated

⁹² See Chapters on Housing and Transport for a full discussion.

efficiency considerations and the lumpy nature of investment mean it may sometimes proceed at a faster rate than population or economic growth.

- 28 The commission’s approach gives each State the capacity to acquire the observed national average per capita stock of infrastructure as it changes from year to year, which would give them the capacity to deliver average services. It makes no judgment that infrastructure levels should rise or fall as populations change. It observes the average State response and gives all States the capacity to achieve the average outcome. As the GST is untied, States can use this capacity as they see fit, including accumulating it to finance ‘lumpy’ infrastructure investment as it occurs.

Staff propose to recommend the commission:

- continue to use its existing methods to recognise that population growth affects State needs for infrastructure and financial assets.

Use of recurrent disabilities

- 29 In the 2010 Review, factors causing interstate differences in the per capita quantity of infrastructure used in delivering services were estimated by the recurrent service use disabilities for each expense category. The resulting disabilities were discounted by 12.5% because some recurrent disabilities do not affect the need for infrastructure. Analysis indicated the discounting achieved a broadly similar result to excluding the specific disabilities that did not affect infrastructure, but did so in a simpler way.
- 30 Disabilities affecting the unit costs of infrastructure were based on the interstate wages and regional cost factors assessed for recurrent expenses.
- 31 At the time, most States supported those approaches as being reasonable and simple, having been through a process of considering which recurrent disabilities should be excluded or whether there were reliable alternative approaches.
- 32 In its August 2013 submission, Victoria said there was not an adequate conceptual case for applying disabilities identified for their relevance to the recurrent costs of service delivery to the provision of infrastructure. By way of example, it said a strong link between socio-economic status and the need for infrastructure was not evident. Where a conceptual case cannot be made to link a recurrent disability to infrastructure needs, that disability should be excluded from the assessment.
- 33 It also noted the wages disability included adjustments to allow for the extra costs incurred by the ACT and the Northern Territory because some of their staff were covered by Commonwealth superannuation arrangements. Victoria said there was no case for extending those allowances to the infrastructure assessments.

- 34 Queensland said using recurrent disabilities strikes a good balance between accuracy, complexity and volatility but asked whether the method of applying them could be simplified without seriously reducing its accuracy.
- 35 The ACT said the existing approach was appropriate, reasonable and relatively simple.
- 36 The suitability of using recurrent disabilities as measures of differential needs for infrastructure depends on several considerations.
 - It is reasonable to assume recurrent disabilities capturing factors affecting the quantity of services States provide also affect infrastructure needs. A State which must provide a 10% above average quantity of services is also likely to need 10% above average infrastructure. Above average service and infrastructure requirements could arise if a State has: an above average proportion of its population in the service's target group (say, school children); an above average proportion of its population in groups which use the services more than others; or a below average proportion of the services provided by non-State providers.
 - Cost disabilities applied to infrastructure should reflect the effect of wages and remoteness on infrastructure costs, which may differ from their effect on recurrent costs. However, capital specific factors were not measured in the past for reasons of simplicity, reliability and materiality.
 - Some recurrent disabilities reflect higher spending on services to some users because the separate contributions of use and service specific cost effects could not be measured. In such cases, decisions must be made on the extent to which the higher recurrent spending is likely to have flow-on implications for the infrastructure requirements.
- 37 Given the broad acceptance by States of the appropriateness of using recurrent disabilities to estimate the infrastructure disabilities, staff propose to continue to adopt that as the default approach. However, we will do the following.
 - We will carefully consider the appropriateness of applying each recurrent disability, especially those which reflect service specific cost differentials, to ensure they have similar implications for infrastructure. Attachment A provides the results of a consideration of the 2012 Update factors. It outlines staff perceptions of the links between those factors and infrastructure requirements. It shows recurrent disabilities are reasonable proxies for asset disabilities in most cases. The work will be redone when final decisions on the factors to be assessed in the 2015 Review and the methods for measuring them are made.
 - We will explicitly omit recurrent disabilities that review concludes do not affect spending on infrastructure. Table 24-2 lists the 2012 Update factors staff consider have no or little impact on infrastructure.
 - We will review the need for the 12.5% discount included in the quantity of infrastructure factors. It is unlikely to be necessary because irrelevant recurrent disabilities will be omitted. This is a more transparent and accurate approach.

Omitting the factors in Table 24-2 instead of applying a 12.5% discount would have changed the 2012 Update GST distribution for some States by more than \$10 per capita.

- We will consider whether extra capital specific disabilities should be developed.

Table 24-2 Recurrent factors which have little or no effect on infrastructure

Category or factors	Why is there a limited link between the factor and infrastructure
Schools	<p>Interstate differences in the number of government school students drive the relative quantities of State assets. Non-government school students should be excluded in calculating the infrastructure factor. (This was not done in the 2010 Review.)</p> <p>Cost weights for low SES and Indigenous students may have lower effects on infrastructure than recurrent costs. Low SES students may need staff but not necessarily more classrooms. The effect of Indigenous students varies by location. Extra capital spending may arise in remote areas, if more staff housing or school security is required. This is less likely in non-remote areas.</p> <p>School transport services are usually acquired from non-government providers which affects recurrent costs but not infrastructure.</p>
Post-secondary	Indigenous cost weights — as for schools
Welfare and housing	Indigenous cost weights have little effect on asset needs because they mostly reflect the extra management and maintenance costs of housing occupied by Indigenous tenants compared to the costs of other tenants in similar locations.
Services to communities	Disabilities reflecting differential subsidies to PTEs and non-State providers of water and electricity have minimal effect on State asset stocks. Assets used to provide services are not usually general government assets, implying a low depreciation weight which means the factor has little effect on assessed infrastructure.
Police	The national capital allowance relates to wages. It does not affect asset stocks.
Roads	The national capital allowance reflects maintenance for wider roads. It does not provide for replacing or increasing the road stock — it does not affect asset costs.
Other services	<p>Natural disaster factors cover all above average disaster assistance and rebuilding. Including them in the Investment assessment would be double-counting.</p> <p>The cultural and linguistic diversity allowance mostly reflects the extra costs arising from language issues. It has minimal effect on assets.</p> <p>The national capital allowance does not affect asset stocks.</p>
Native title and land right factors	The factors cover all interstate differences in costs of resolving and compensating claims. Including them in the Investment assessment would be double counting.
Interstate wage costs	Allowances for the extra costs of Commonwealth superannuation arrangements for some Territory public servants would not apply to the wages element of infrastructure costs. They should be excluded from the factor applied to assets.

State views are sought on:

- which recurrent disabilities do not affect infrastructure requirements.

Staff propose to recommend the commission:

- continue to base the infrastructure factors on the recurrent disabilities
- exclude those disabilities which have minimal impact on infrastructure
- review the requirement for the 12.5% discount.

Capital specific disabilities

- 38 Several States said infrastructure costs are affected by some capital specific factors. Victoria said urbanisation increases construction costs over and above the factors currently included in the Investment assessment. It said this is because: increasing population density creates the need for more complicated and expensive engineering works, such as tunnelling for road and rail projects; property must be acquired; and projects in urban areas often require ‘work-arounds’ and extra co-ordination costs.
- 39 Western Australia said the recurrent wage and regional non-wage cost factors understated its infrastructure cost disabilities. It said an infrastructure cost disability should be developed, using data from the Rawlinsons Construction Handbook⁹³. Using those data, Western Australia calculated its disability at 7.2% (5.3% interstate and 1.9% regional cost factors); half as much again as the current disability of 4.8%.
- 40 The Northern Territory said the assessments should recognise that its infrastructure costs were often substantially increased by aspects of the physical environment. Other States doubted any extra costs could be reliably measured.
- 41 **Urbanisation.** The issues raised by Victoria suggest there may be a case that urbanisation adds to the complexity and cost of infrastructure in big cities. However, the existing disabilities for urban road length and use and the proposed urban transport infrastructure assessment capture some of those effects. While they are broad measures, data are not available to separately identify and reliably measure extra big city effects.
- 42 Staff will consider whether extra urbanisation allowances should be assessed if suitable data become available and advise the commission accordingly.
- 43 Such data would need to include information which facilitates measurement of the extent to which the existing or proposed factors understate the effects of city size on technological approaches to infrastructure projects and the resulting construction and other costs. Information would also be required on whether or not such cost differences are affected by current and past State policies on urban development, the extent to which transport easements have been provided for and the extent to which major projects are undertaken through public-private partnership arrangements.

⁹³

Rawlinsons Australian Construction Handbook, Edition 31, 2013

- 44 **A capital cost index.** It would be appropriate to develop a capital cost index if it could be done reliably, is policy neutral and has a materially different effect on the GST than the existing recurrent wages and regional cost indexes.
- 45 We have conducted an initial examination of the regional and capital city building cost indexes produced by Rawlinsons.
- The regional index provides building cost differences for selected locations in each State relative to the State capital. The cost differentials are prepared by comparing the costs of similar projects in each location. They could be combined to produce a regional cost index for each State and an Australian average regional cost curve. Further consideration is needed to decide:
 - what cost index should apply to locations Rawlinsons do not cover — assuming locations with similar degrees of remoteness have similar building cost indexes would seem reasonable
 - how the building costs data for each location are best combined to derive an average cost index for each level of accessibility and remoteness — Ideally, the index for each region would be weighted by the value of infrastructure in the region, but such data are not available. Since the location of most infrastructure is related to the people served, weighting by population as in the recurrent regional cost index would be a reasonable approximation.
 - A Regional Variation Index is also produced to show costs in each capital city relative to Sydney (see Table 24-3)⁹⁴. This index is derived annually from a review of building prices across a limited range of buildings, tender returns, market conditions and discussions with contractors, consultants and suppliers. As such, it would be affected by interstate differences in State policies on State tax rates, building codes and regulation. An officer from Rawlinsons has suggested the index could be used for interstate comparisons. While he has no way of reliably identifying any impact of State policy differences, he believes it would be minor.

Table 24-3 Capital city building price indices, 2012

	Sydney	Melbourne	Brisbane	Perth	Adelaide	Hobart	Canberra	Darwin
RVI	1.00	0.97	0.94	1.04	0.99	1.01	1.03	1.22

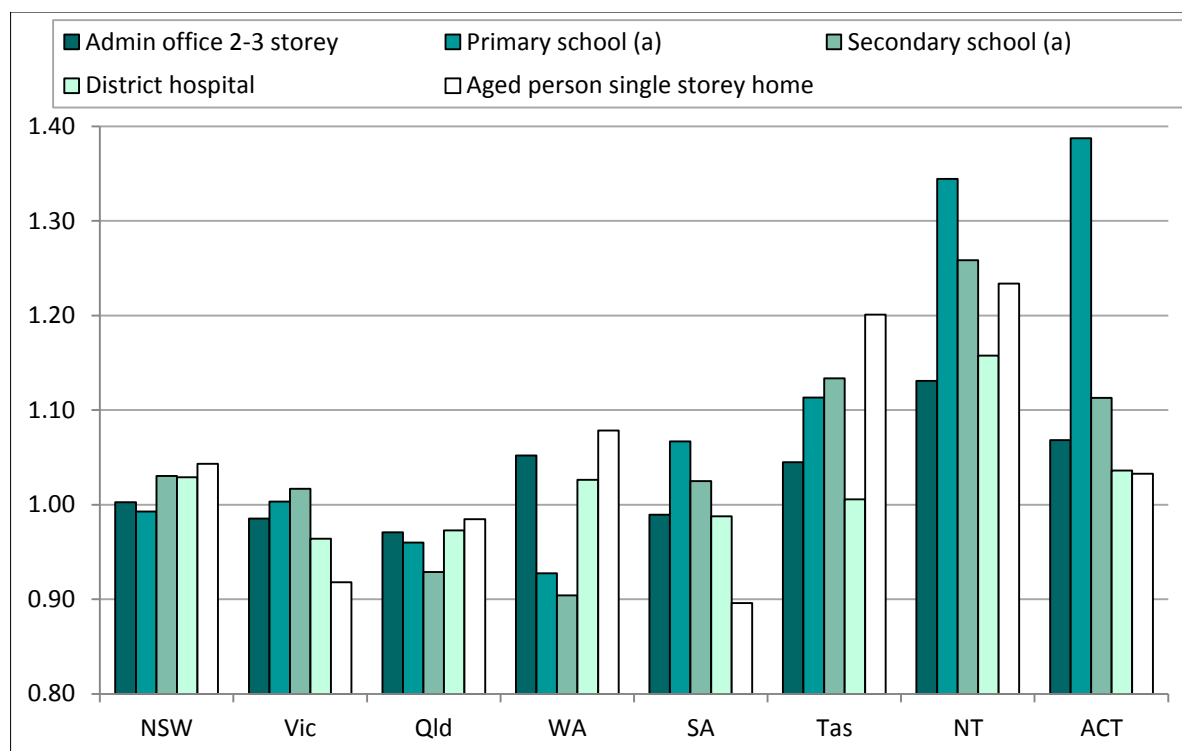
Source: Rawlinsons Construction Cost Handbook, Edition 31, 2013, BPI page 3, RVI page 875.

- An examination of the cost indices for given cities for different types of buildings indicates the interstate relationships vary considerably for different

⁹⁴ Rawlinsons produce a third index of capital city building prices. However, this index reflects price changes over time for each capital city and the documentation clearly says it does not reflect the relative cost differentials between the cities.

types of buildings. For example, the 2012 cost indexes for secondary schools⁹⁵ in Perth and Melbourne were 0.90 and 1.02 respectively but those for hospitals⁹⁶ were 1.03 and 0.96. There are similar differences across other capitals and building types (see Figure 24-1). Staff are seeking advice from Rawlinsons on the reasons for these different relationships.

Figure 24-1 Cost indices for various building types by capital city, 2012



Source: Rawlinsons Australian Construction Handbook, Edition 31, 2013

- Basing a capital cost index on a combination of the two regional indices prepared by Rawlinsons would capture some elements of interstate and regional differences in physical environment, such as climate, wind and soil. It would not, however, capture all the influences covered by the physical environment consultancy report, especially the effects of terrain.
- The capital city index also captures some urban influences to the extent that city size and related factors affect the construction costs of specific buildings including labour and plant hire.

46 While the Rawlinsons indices may provide a suitable basis for measuring interstate differences in building construction costs, they may not apply to all investment. For example, it may not be an appropriate measure of interstate differences in road construction costs, which were about 30% of investment from 2009-10 to 2011-12.

⁹⁵ Secondary school – maximum 3 storeys, standard finishes.

⁹⁶ Hospital district – single storey, 60 bed, operating theatre, partial air-conditioning.

Staff seek State views:

- on the suitability of using Rawlinsons cost indices to derive a capital cost factor
- on whether a construction cost factor based on Rawlinsons cost indices would adequately capture physical environment and urbanisation disabilities.

- 47 **Physical environment.** The report from the commission's consultant indicates interstate differences in major aspects of the physical environment affect the costs of constructing infrastructure, especially roads, schools and housing. A copy of that report was sent to States on 24 July 2013.
- 48 Applying cost factors based on that advice⁹⁷ to the 2013 Update Investment and Depreciation assessments would materially affect the Northern Territory's GST.
- 49 The consultant examined the effects of topography, rainfall, temperature, wind, shrink/swell of soil and acid sulphate soil on infrastructure costs. They focussed on those environmental features because they:
- were identified by technical specialists as factors likely to have a material impact on the cost of constructing or maintaining roads and/or buildings
 - could be measured and mapped using comprehensive, publically available data
 - could be confidently linked to costs.
- 50 The consultant also identified flooding and soil salinity as potentially having material effects but they were not included. There were no nationally consistent data available that would allow flood prone or soil salinity regions to be identified and mapped consistently across States. In addition, there are many salinity mitigation techniques which make it difficult to develop reliable uplift factors.
- 51 The consultant's report provides a basis for assessing a physical environment factor.
- The data and methods used to map State assets and environmental characteristics are reliable. With the exception of urban and rural roads, the data were from publically available datasets, covered all regions of Australia and were nationally comparable. Rural roads were accurately mapped using the commission's synthetic rural network. Urban road lengths have been measured using the same urban population proxy as the commission uses. The consultant was unable to link environmental characteristics directly to urban populations. Instead, they allocated the entire population in each State to different environmental characteristics and used this as a proxy for the distribution of population in urban centres. They considered this appropriate because 90% of Australia's population is in urban areas.

⁹⁷ This calculation assumed the cost uplift factors the consultant suggested for schools also applied to infrastructure used in providing other State services (except public housing).

- The cost uplift factors were estimated by experts in the fields of civil engineering, quantity surveying and cost estimation and the consultant’s report indicates they are conservative⁹⁸.
 - The effects of omitted environmental factors could be expected to move in similar directions to those which have been measured.
- 52 The introduction of a physical environment factor and a capital costs factor based on the Rawlinsons regional construction cost indices would create some double counting. Final consideration of the two issues would need to ensure double counting is avoided.

State views are sought on:

- whether the report provides a suitable basis for assessing the effects of the physical environment on infrastructure costs.

Implications of economic development

- 53 Queensland, Western Australia and the Northern Territory said the commission’s assessments do not adequately recognise the implications of their need to promote and support mining and other economic development on their fiscal capacities. They said they faced a wide range of additional recurrent and capital costs because:
- they need to invest in common user infrastructure ahead of actual demand, creating large opportunity costs and risks — discussed in the chapter on mining related expenditure
 - they had to invest in roads to connect centres of economic activity — discussed in the roads investment section below
 - the growing number of fly-in/fly-out workers created extra demand for some services and associated infrastructure and duplicated the need for some infrastructure — discussed in the chapter on mining related expenditure
 - they need to provide support for community amenities — discussed in the Services to communities chapter.
 - intrastate migration creates extra needs for infrastructure — discussed below.
- 54 Other States noted the up-front allowances for population growth addressed some of these claims, especially those relating to the advance provision of infrastructure.
- 55 **Intrastate migration.** Queensland argued intrastate migration creates an additional infrastructure burden, even if the total population does not increase. It said while the location factors allow for the extra costs per unit of infrastructure, the additional infrastructure need itself is not recognised.

⁹⁸ The consultants did not estimate some uplift factors because of the difficulty of doing so and the estimates they did make were said to be conservative.

- 56 The Investment assessment provides States with the capacity to hold the average per capita amount of infrastructure for every person in their State at the end of the year, adjusted for their disabilities. How each State manages that capacity, including how it allocates it across regions in the State, is a matter of policy. If a State's total population does not change but people move from one region to the other, the assessment implies the extra infrastructure required in gaining regions would be offset by reducing the stocks in losing regions — either by selling some or letting it depreciate.
- 57 Difficulties of reducing infrastructure stocks in regions suffering population losses may constrain the capacity of States to manage their infrastructure stocks in this way, especially if the population losses exceed the depreciation rate. However, this does not appear to be a material issue. Table 24-4 shows the extent to which regions in each State had net losses of population over the 3 years 2009 to 2012.

Table 24-4 Population declines in statistical areas, 2009 to 2012

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Population reduction									
Major city	1 918	6 314	93	34	1 287	433	4 839	592	15 510
Rural	3 037	5 940	1 033	401	2 100	1 140	0	580	14 231
Total	4 955	12 254	1 126	435	3 387	1 573	4 839	1 172	29 741
Number of statistical areas where population fell									
Major city	12	36	4	3	19	7	53	5	139
Rural	43	46	20	7	25	24		5	170
Total	55	82	24	10	44	31	53	10	309

Note: The data are prepared using statistical areas level 2 (broadly suburbs in major cities and towns or rural regions in other areas) There are about 2190 statistical areas level 2 across Australia.

Source: ABS, Regional population growth, Australia, Cat 3218.0, August 2013.

- 58 Table 24-4 shows the population of 82 statistical areas in Victoria fell by a total of 12 254 people over the 3 years and in Queensland 24 statistical areas experienced a combined population fall of 1 126 people. About 45% of the areas experiencing population declines are in major cities. In most areas, the average annual population decline is less than the average depreciation rate.

Staff propose to recommend the commission:

- not assess allowances for intrastate migration because they would be immaterial.

Combining recurrent disabilities

- 59 Each State's aggregate infrastructure disability is obtained by combining the factors for each service. Ideally, this combination would be the summation of the factor for each service weighted by the national average proportion of the total infrastructure stock attributed to each service. However, the ABS GFS does not contain data on the national asset stock dissected by function — not even a roads/non-roads split.
- 60 In the 2010 Review, the commission decided the proportions of depreciation expenses attributed to each service were suitable proxies for the asset proportions.
- 61 This approach assumes the depreciation rates for each service are the same. However, some assets have longer economic lives and lower depreciation rates than others. In this case, using the depreciation shares to estimate asset shares underestimates the proportion of the asset stock attributed to long lived assets and the GST of States with high needs for long lived assets.
- 62 Depreciation rates drawn from the annual financial statements of selected State agencies show noticeable differences. The rates for roads are much lower than those for education assets. To further illustrate the point, Table 24-5 compares the estimated value of road and non-road assets implied by the accounts of State agencies with those implied by the current assessments. It shows roads represented about 30% of depreciation in 2010-11 but 54% of the asset stock. The current assessments almost halve the importance of roads in State asset stocks.
- 63 The accuracy of the assessments would be improved noticeably and the GST distribution of most States would change by over \$10 per capita if the weights applied to recurrent disabilities were based on the value of assets used in each service rather than the service's share of depreciation expenses.
- 64 We have asked States for data on the value of infrastructure dissected by purpose.

Table 24-5 Value of asset stocks (a)

	Roads	Non-roads	Total stock	Road proportion
	\$m	\$m	\$m	%
2009-10				
Depreciation weight approach	94 997	209 481	304 478	31.2
Values from State accounts	173 089	131 389	304 478	56.8
2010-11				
Depreciation weight approach	97 471	222 947	320 418	30.4
Values from State accounts	174 421	145 997	320 418	54.4

- (a) Figures are for general government sector 'produced assets'. Adjustments are made to exclude public housing in States where those services are provided by general government agencies.
- Source: Data used in the 'depreciation weight approach' are from GFS. For the 'values from State accounts' approach, roads data are from Road agency annual reports, total asset values are from GFS.

Staff propose to recommend the commission:

- use the proportions of assets used to provide each service to weight the factors for each service where those proportions can be reliably measured.

Roads investment

65 Road investment is assessed as a separate component of the Investment category. Under the existing methods, road investment is assessed using the road length, heavy vehicle use, and traffic volume factors applied in the road maintenance category. Each factor is weighted by its contribution to construction costs. Another factor captures national needs met by the Commonwealth distribution of capital grants for National Network Roads⁹⁹. As different methods are used to derive road length factors for rural and urban roads, roads investment is sub-divided into two components.

66 The roads investment assessment raises several issues.

- It has previously been noted that population growth has no effect on the assessed investment for rural roads¹⁰⁰. Assessed rural road investment depends on each State's share of the road network, its share of road use and changes in road use. Consequently, States with above average growth in rural population would have below average assessed rural road infrastructure per capita, implying below average capacities to provide rural road services. The opposite would apply to States with below average rural population growth.

The validity of the current approach seems to be influenced by the purpose of the road investment. If investment is primarily directed to improving the quality of the rural road network, the existing approach is reasonable. If rural road investment is mostly directed to building new roads, it may be less appropriate.

State views are sought on:

- the purposes of their investment in rural roads in the last three years.
- Some States have argued the road investment assessment does not allow for their need to build and maintain roads to support State development. Their main point was that the policy neutral rural road network does not include

⁹⁹ This factor is equivalent to excluding 50% of the National Network Roads grants from the expenditure and the revenue assessments.

¹⁰⁰ This is because rural road length factors are derived from the commission's policy neutral road network (reflects the shortest road distances between population centres of 400 people or more) whose length was not updated from year to year. That network was not updated because the effects of changes in relevant population centres and State road construction were negligible.

State roads connecting centres of existing or proposed economic activity that are not located in population centres.

In the 2010 Review, the commission consulted the States on the scope of the policy neutral rural network. It decided to confine it to roads connecting population centres of 400 or more on the grounds of simplicity and materiality. To help determine whether that approach remains appropriate, staff have asked States for information on the roads which would be added to the policy neutral network if it included roads connecting centres of existing or proposed economic activity to each other or to population centres of 400 or more.

- The allowances for national policy influences on roads investment are currently equivalent to excluding 50% of the Commonwealth payments for the national network roads and the investment they fund, from the assessments. If data are not available to reliably measure national disabilities, staff propose to continue to exclude 50% of the Commonwealth payments.

A simplified presentation of the Depreciation assessment

- 67 Victoria suggested the Depreciation assessment could be simplified by applying a national average depreciation rate to each State's assessed stock of non-financial assets without applying expenditure disabilities.
- 68 As we understand this suggestion, it relates to presentation. Currently, the Depreciation assessment follows the same methods as all other expense assessments. The average per capita expense is adjusted by the relevant disabilities. That approach is relatively simple and transparent.

PROPOSED CATEGORY STRUCTURE

- 69 Staff propose the following assessment structure for these categories in the next review.

Table 24-6 Proposed Investment category structure

Component	Disability	Influence measured by disability
Roads	Quantity of infrastructure	Road length and use and, if appropriate, national policy effects; with each factor weighted according to its effect on construction costs.
	Unit cost	Factors affecting costs of each unit of infrastructure. A composite of recurrent wage and non-wage location factors or, if appropriate, a capital cost index.
Urban transport	Quantity of infrastructure	City size and, if appropriate, national policy effects.
	Unit cost	As above
Other services	Quantity of infrastructure	Recurrent factors affecting the quantity of services provided.
	Unit cost	As above
Land		Equal per capita

Table 24-7 Proposed Depreciation category structure

Component	Disability	Influence measured by disability
Services expenses	Quantity of infrastructure	Recurrent factors affecting the quantity of services provided.
	Unit cost	Factors affecting costs of each unit of infrastructure. A composite of recurrent wage and non-wage location factors or, if appropriate, a capital cost index.

ATTACHMENT A

TABLE A-1 2010 REVIEW EXPENSE DISABILITIES AND IMPACT ON STATE CAPITAL REQUIREMENTS

Category/ Disability	Influence or disability being measured	Link between disability and physical assets
COMMON FACTORS (Disabilities applied to all or several expense categories)		
Administrative scale	Allows for unavoidable costs incurred to provide the policy and administrative infrastructure for the minimum level of service, regardless of State size.	A State with a recurrent administrative scale disability will have higher capital costs per capita reflecting the need for additional office space and equipment.
Location	Recognises the interstate and regional differences in the cost of labour and non-labour inputs.	<p>The disability captures several influences, some of which do not fully apply to physical assets. Differences between States in wage costs will affect construction costs to the extent that labour is an input to construction. While Commonwealth superannuation arrangements in the ACT and the Northern Territory affect the costs of general government staff used to deliver services they are most unlikely to affect the cost of labour used to construct infrastructure. There is no direct link between labour cost differences and the cost of plant and equipment.</p> <p>Differences between States in the cost of non-labour inputs and freight are likely to affect construction, plant and equipment costs. They would affect asset costs.</p>
Native title	Recognises extra costs incurred by the States due to the operation of the Australian Government's Native Title Act 1993. ^(b)	This is an actual per capita assessment. All relevant costs are included in the figures. Those costs are mostly administrative and negotiation expenses and compensation paid and would include any capital costs. This disability has minimal impact on physical assets. Applying it to infrastructure would be double counting.
Land rights	Recognises additional and unique costs of providing services in the Northern Territory because of the operation of the Australian Government Aboriginal Land Rights (Northern Territory) Act 1976. ^(b)	This is an actual per capita assessment. The identified costs are predominantly administrative, negotiation and liaison costs plus agreed compensation costs. All relevant expenses are reflected in the disability. This disability does not apply to physical assets. Applying it to infrastructure would be double counting.
Cross border	Recognises cross border use of school services.	This use factor has a proportionate effect on all inputs. More students implies more classrooms and equipment. This factor is applicable to physical assets.

Category/ Disability	Influence or disability being measured	Link between disability and physical assets
SERVICE COSTS (Category specific disabilities)		
Schools education (Depreciation indicative weight 11.8%)		
Socio-demographic composition	Recognises that different population groups use services at different rates and have different per unit service delivery costs. Use weights are based on age, Indigeneity and non-policy influences on the number of post-compulsory enrolments. Cost weights are based on Indigeneity, low SES and school sector.	<p>The SDC use weights will have a proportionate effect on the quantity of labour, non-labour and physical assets required to deliver school services. For example, more students implies more classrooms and equipment. This factor is applicable to physical assets. However, an adjustment should be made to exclude the effect of interstate differences in non-government enrolments.</p> <p>SDC cost weights are unlikely to result in a proportionate need for physical assets. Low SES students may increase the need for teachers but not necessarily classrooms. The effect of Indigenous students varies by location. Extra capital spending may arise in remote areas, if more staff housing or school security is required or asset life is reduced. The disabilities only partly apply to assets.</p> <p>The non-government school sector cost factor will not affect the quantity of physical assets required by a State to deliver services. The physical assets required to deliver these services are owned by the non-government service providers. This disability is not applicable to physical assets.</p>
Service delivery scale	Recognises the diseconomies of scale associated with providing schools in sparsely population areas.	A State that has more schools in sparsely populated areas is likely to face greater capital costs per capita. This disability is applicable to physical assets.
Transport of school children	Recognises State expenses on transport of school children. This factor is applied to 5.2% of expenses, which is the transport expenses component.	The average State policy is to acquire school transport services from private contractors. There is no requirement for States to acquire physical assets. The disability does not apply to State assets or depreciation.
Post secondary education (Depreciation indicative weight 4.7%)		
Socio-demographic composition	Post secondary use	This use factor will have a proportionate effect on the quantity of recurrent and capital inputs. This factor is applicable to physical assets.
	Post secondary cost (Indigeneity and remoteness)	SDC cost weights are unlikely to have a proportionate effect on physical assets. The full effect of these disability factors is not applicable to physical assets.

Category/ Disability	Influence or disability being measured	Link between disability and physical assets
Admitted patients (Depreciation indicative weight 11.3%)		
Socio-demographic composition	Recognises that different population groups use services at different rates and have different per unit service delivery costs. Population characteristics assessed are: age, Indigeneity, location and SES.	SDC use and cost influences are likely to affect expenses and physical assets similarly. More patients imply more (bigger) hospitals and higher per unit service delivery costs often reflect a longer length of stay. This will affect the quantity of all inputs needed to deliver services. This factor is applicable to physical assets.
Community and other health services (Depreciation indicative weight 5.3%)		
Socio-demographic composition	Recognises that different population groups use services at different rates and have different per unit service delivery costs. Population characteristics assessed are: age, sex, Indigeneity, and SES.	The SDC factor is likely to have a proportionate effect on the quantity of labour, non-labour inputs and physical assets required to deliver services. This factor is applicable to physical assets.
Welfare and housing (Depreciation indicative weight 10.7%)		
Socio-demographic composition	Low SES (use)	These use factors will have a proportionate effect on the quantity of all inputs required to deliver services. These factors are applicable to physical assets.
	Indigeneity (use)	
	Indigeneity (cost)	This disability captures the additional costs of managing and maintaining Indigenous housing. Expenditure on maintenance has little effect on the quantity of stock required to deliver housing services, but may be indicative of a reduced economic life. This disability would have limited relevance to physical assets.
First home owners scheme	Recognises additional costs incurred by States due to payments under the First Home Owners Scheme.	This is proposed to be an equal per capita assessment. As such it will not differentially affect recurrent costs or physical assets.
Services to communities (Depreciation indicative weight 0.2%)		
Water and electricity costs (Concessions)	Recognises interstate differences in the cost of electricity and water subsidies to individuals. The concessions target low income people. The disability is discounted to only apply to the relevant expenses.	This factor will not influence the quantity of physical assets States require to deliver services. The assets are owned by PTEs or non-State providers. This disability is not applicable to physical assets.
Water and electricity costs (General subsidy CSOs)	Recognises interstate differences in the cost of subsidies to isolated communities for the provision of electricity and water services. The disability is discounted to only apply to the relevant expenses.	Subsidies per capita may need to be larger if physical asset requirements per capita are greater. However, the physical assets required to deliver these services are usually owned by PTEs or non-State providers. States do not spend on them. This disability is not applicable to physical assets. The low depreciation weight for the component means it has negligible effect.

Category/ Disability	Influence or disability being measured	Link between disability and physical assets
Indigeneity	<p>Recognises interstate differences in the costs of community development (planning and governance) services for discrete Indigenous communities.</p> <p>An increasing number of States have been providing subsidies (including capital subsidies) for water and desalination plants in major urban areas. The capital part of these subsidies should be assessed EPC.</p>	<p>This factor will have a proportionate effect on all inputs required to deliver services. It is discounted to only apply to the relevant expenses in the category, including depreciation expenses. This factor is applicable to physical assets.</p> <p>If an EPC element is introduced into the recurrent assessments, it would also apply to the physical assets because the assets funded by the subsidies are not owned by general government agencies.</p>
Justice services (Depreciation indicative weight 5.1%)		
Socio-demographic composition	Recognises that different population groups use services at different rates. Population characteristics assessed are: Indigeneity, age and low SES.	This use factor will have a proportionate effect on the quantity of all inputs required to deliver services. This factor is applicable to physical assets.
Service delivery scale	Recognises the additional cost of providing services from police stations in sparsely populated areas.	A State that has more police stations in sparsely populated areas is likely to face greater capital costs per capita. This disability is applicable to physical assets.
National capital	Recognises additional costs incurred by the ACT that stem from Canberra's status as the national capital.	The national capital allowance is directly linked to police wages. It is not applicable to physical assets.
Public safety (Depreciation indicative weight 2.1%)		
Socio-demographic composition	Population	This use factor will have a proportionate effect on the quantity of all inputs required to deliver services. It is applicable to physical assets.
Roads (Depreciation indicative weight 31.0%^(c))		
Urban road length	Recognises expenses are affected by the non-policy influenced length of urban road networks, proxied by urban populations. Includes National Network Roads.	Roads account for a large part of State physical assets. The disabilities aim to capture interstate differences in road maintenance costs. Road use and length are likely to affect the stock of assets. However, different weights are applied to road length, volume and use disability factors in the maintenance costs and investment assessments. Other factors for local roads, bridges and other services are not applied in the road investment assessment.
Rural road length	Recognises expenses are affected by the length of rural roads. Includes National Network Roads.	
Traffic volume	Recognises the effect on maintenance and traffic management costs of road use.	
Heavy vehicle use	Recognises effects of heavy vehicles on maintenance.	

Category/ Disability	Influence or disability being measured	Link between disability and physical assets
Local roads	Recognises that some States maintain roads normally managed by local governments.	
Other services	Recognises some road related expenses are not affected by length or use.	
National capital	Recognises additional costs incurred by the ACT that stem directly from unavoidable consequences of Canberra's status as the national capital.	This allowance is linked to the impact of the National Capital Plan on the ACT's road network. However, it will not apply when existing roads reach the end of their economic life. It affects maintenance and depreciation but not investment.
Transport services (Depreciation indicative weight 0.9%)		
Transport subsidies	Recognises differences between States in the average per capita subsidies in non-urban areas and urban areas of different sizes.	This factor recognises interstate differences in the subsidies paid to transport providers to offset recurring losses. Subsidies per capita may need to be larger where physical assets requirements per capita are greater. Since the service is to be treated like a general government one, similar disabilities may apply to assets.
Services to industry ((Depreciation indicative weight 2.8%)		
Economic environment	Recognises interstate differences in the cost of services to industries are related to State population, industry size and the number of establishments.	This use factor will have a proportionate effect on the quantity of all inputs required to deliver services. This factor should be applied to physical assets.
Other services (Depreciation indicative weight 14.1%)		
National capital	Recognises additional costs incurred by the ACT that stem directly from influences that are unavoidable consequences of Canberra's status as the national capital and seat of government.	The allowance is linked to the impact of the National Capital Plan on the ACT's capital works program and planning and development activities. It also recognises the above standard costs incurred by the ACT in operating a leasehold system. It recognises all extra costs, so should not be applied to capital stocks.
Natural disasters	Recognises State net expenses on natural disaster relief.	It is an actual per capita assessment which recognises all extra spending. It would be double counting if the factor was applied to physical assets.
Cultural and linguistic diversity	Recognises the differential costs incurred in providing services to people from cultural and linguistically diverse backgrounds.	This factor covers effects in health, welfare and education categories. It predominantly reflects the extra costs associated with overcoming language difficulties. It would have limited application to physical assets.

CHAPTER 25 – NET LENDING

2010 REVIEW APPROACH

- 1 The Net lending assessment was included in the 2010 Review to derive the savings (or dis-savings) States need to make in a year if they are to have the same fiscal capacities. Without this assessment, the commission's aim of equalising net financial worth would not be achieved.
- 2 The assessment covered the acquisition/disposal of State general government sector financial assets and liabilities which are the transactions that lead to changes in a State's net financial worth (or net financial assets).
- 3 Assessed net lending was calculated as the difference between a State's assessed stock of net financial assets at the end and the beginning of a year, assuming it had the average per capita amount at both times (See Box 1). The assessment allows for the impact of differential population growth on net financial assets.

Box 1 Calculation of assessed net lending

$$\text{Assessed net lending} = \left\{ \left[\left(\frac{NFA_1}{P_1} \right) p_{i1} \right] - \left[\left(\frac{NFA_0}{P_0} \right) p_{i0} \right] \right\}$$

p_{i1} and p_{i0} are the populations of State i at the end and the start of the year

P is the Australian population

NFA is the Australian total net financial assets

NFA is the Australian total net financial assets

NFA_0 is calculated as NFA_1 minus net lending₁. This method ensures that

NFA_0 and NFA_1 are in the same price levels

- 4 Population growth was the only disability recognised in the assessment. Population growth dilutes the value of net financial assets per capita, which reduces the capacity of States to earn interest and dividend revenue from those assets. States with above average growth face greater reductions in that capacity.
- 5 The 2010 Review Net lending assessment was based on several assumptions. These were:
 - States start the year with equal per capita net financial assets
 - financial assets are revalued at the average rate
 - States hold the same share of financial assets in each asset class and can earn the average rate of return on them
 - States face the same cost of borrowing.

- 6 The commission considered each of those assumptions was reasonable, but uncertainty around them led it to discount the assessment by 25%.
- 7 As net financial worth has been equalised, there is no need to assess differences in State capacities to earn a return on those assets. Interest and dividend income are assessed EPC in Other revenue and debt charges are assessed EPC in Other expenses.

ISSUES AND ANALYSIS

- 8 Most States discussed the Net lending assessment in the context of the simplified and integrated framework (see 2013-06S *Implementation and methodological issues*).
- 9 Specific issues raised in relation to the assessment are:
 - the inclusion of housing and urban transport PTEs in scope
 - whether the correct disabilities are assessed
 - the need for a discount.

Inclusion of housing and urban transport agencies in scope

- 10 The commission proposes to expand the scope of equalisation to include the operations of government in providing housing and urban transport services.
- 11 This has implications for the Net lending assessment. The main one is that housing and urban transport infrastructure will no longer be treated as part of net financial assets. It will be treated in the same way as other infrastructure and State needs for investment and depreciation will be assessed. To do that, the accounts of the relevant agencies and the government sector will be consolidated, which will include moving the value of housing and urban transport infrastructure from net financial assets to general government infrastructure.
- 12 Equity in PNFCs is the largest component of financial assets in all States except Queensland. In 2011-12, it was 72% of total net financial assets. The proportion varied between States (from 36% in Queensland to over 80% in Victoria, Western Australia and South Australia) primarily reflecting differences in State policies.
- 13 ABS data for 2008-09 suggest equity in housing and rail agencies is 50% of total State equity. The proposed change in the treatment of housing and urban transport will substantially reduce the average level of net financial assets. It will also reduce the significance of the assumption that interstate differences in the composition of financial assets are driven by policy choices and thus all States could earn the average rate of return on their financial assets, if they follow average policies.
- 14 Calculations suggest the Net lending assessment may not be material when housing and urban transport infrastructure is reclassified to the general government sector. However, staff propose to retain the Net lending assessment because:

- it is fundamental to the current processes for implementing equalisation (giving all States the capacity to hold the same net financial assets per capita)
 - the aggregate impact of population growth across the Investment and Net lending assessments will be material.
- 15 Western Australia supports the retention of the Net lending assessment regardless of its materiality because it is an integral part of the assessment of population dilution.

Staff propose to recommend the commission:

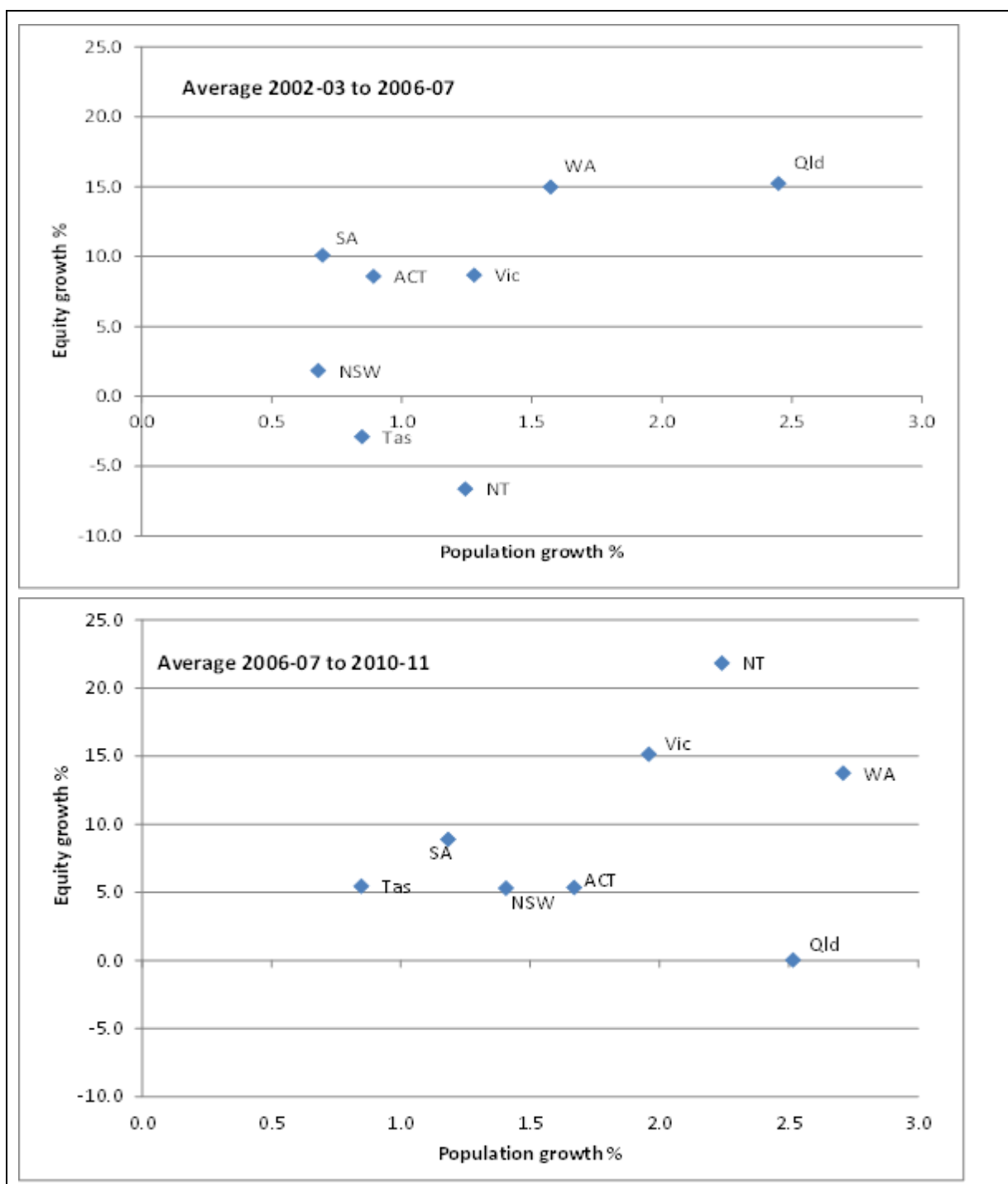
- retain the Net lending assessment regardless of materiality.

Are the correct disabilities being assessed?

- 16 Tasmania, the ACT and the Northern Territory raised issues over the assumptions relating to revaluations of assets and borrowing costs.
- 17 **Revaluation of assets.** Tasmania and the ACT expressed concerns over the full equalisation of population growth. They said population growth can reduce State needs, in particular, through the revaluation of assets. Tasmania argued higher population growth leads to greater increases in the value of PNFCs because:
- it increases customer demand leading to higher profits because PNFCs tend to be natural monopolies
 - it increases the relative scarcity of their assets, particularly land
 - it is historically closely related to economic growth.
- 18 The current assessment implies non-policy factors affecting revaluations are the same in all States. That is, all interstate differences in revaluations are assumed to stem from differences in State policies.
- 19 Revaluations and other non-transaction changes are the main source of change in the value of State equity holdings. However, it is not necessarily the case that States with faster population growth have an advantage in the form of greater revaluations. Revaluations reflect numerous things, including the effects of regulatory policies on trading conditions, State accounting policies and practices on asset valuations, and population growth. There is no way to reliably disentangle the various effects.
- 20 Based on data for the 5 years to 2006-07 and the 5 years to 2010-11, Figure 25-1 shows the relationship between the growth in equity and population growth is not clear. Any relationship seems to vary over time. The increase in population growth rates in Western Australia, South Australia and the ACT in the 5 years to 2010-11 was not accompanied by increases in their rate of equity growth, but it was in New South Wales and Victoria. Population growth in Queensland was largely unchanged in the 2 periods, but equity growth fell, although this outcome may partially reflect the sale of

QR National in November 2010. Tasmania's population growth was also stable but equity grew in the second period.

Figure 25-1 Average annualised growth in equity and estimated resident population, 2002-03 to 2010-11



Note: The figure shows the relationship between total growth in equity (which comes from State investment in PTEs and revaluations) and population growth. Ideally the analysis should be confined to the effects of revaluations but the necessary data are not available.

Source: ABS 5512 Government Finance Statistics 2010-11 and ABS estimated resident population.

- 21 It is important for the Net lending assessment to include revaluations in the calculation of the average value of net financial assets. This is the price States have to pay to acquire the assets. Over several years, revaluations affect the GST distribution because, other things being equal, they increase the average value of net financial worth per capita which magnifies the effect of population growth.
- 22 **Borrowing costs.** The assessment assumes States face the same costs of borrowing. The Northern Territory argued it faces higher borrowing costs because of a liquidity factor as well as its weaker credit rating position.
- 23 Differences in borrowing costs reflect many factors such as a State's level of debt, balance sheet strength, operating performance, economic performance, institutional stability, financial flexibility, liquidity and debt management, off-balance sheet liabilities and its credit rating. Most of these factors are influenced by State policy and therefore are not grounds for assessing a disability.
- 24 The comparatively low volumes of debt may also result in the smaller States facing an interest premium. Informal advice from Reserve Bank officials during the 2010 Review indicated the 4 smaller States pay about 5 basis points more than larger States due to their lower volumes of debt. While the margin may have changed in recent years, an allowance based on higher costs of that order of magnitude falls well short of the materiality thresholds.

Staff propose to recommend the commission:

- not make allowances for differences in the revaluation of assets or differential borrowing costs.

Is a discount required?

- 25 Uncertainty around the assumptions in the assessment led the commission to discount the results by 25% in the 2010 Review.
- 26 Western Australia said the discount should be removed because it implies high growth States can earn above average returns on their financial assets or face higher costs of borrowing. It said that is not so for cash deposits and bonds and there is no evidence or conceptual case to believe high growth States earn higher returns from their PNFCs.
- 27 Proposed changes to the treatment of equity in housing and urban transport PNFCs will reduce the importance of the Net lending assessment and any uncertainty in its assumptions, particularly those relating to rate of return or different types of assets. As a result, the discount will not have a material effect on the GST distribution in the future.

Staff propose to recommend the commission:

- remove the 25% discount from the assessment.

PROPOSED CATEGORY STRUCTURE

28 Staff propose the following assessment structure for this category in the next review.

Table 25-1 Proposed Net lending category structure

Component	Disability	Influence measured by disability
Net lending	Differential population growth	The disability recognises the impact of population growth on a State's capacity to hold the same per capita level of net financial worth.

CHAPTER 26 – PRIORITY ISSUE INDIGENEITY (INCLUDING SOCIO-ECONOMIC STATUS)

BACKGROUND

- 1 We recognise that Indigenous people are not homogenous and that States spend much more on providing services to some Indigenous people than to others. These groups of Indigenous people are not evenly distributed across States.
- 2 In the 2011 Census 20% more Australians identified as being Indigenous than had been expected from births, deaths and migration of the Indigenous population in the 2006 Census. These newly identifying Indigenous people are not evenly distributed between States and appear to have lower levels of disadvantage, and presumably lower levels of use of State services than those who had previously identified as being Indigenous.
- 3 The terms of reference for the 2015 Review ask that the commission ‘develop methods to appropriately capture the changing characteristics of the Indigenous population.’
- 4 We have previously engaged with States on this issue, most significantly through Discussion paper *CGC 2012-04 Relative Indigenous Disadvantage*, which we sent to States in August 2012, a Data Working Party meeting in August 2012 and through a telepresence conference on 23 September 2013.
- 5 We consider that appropriately capturing the characteristics of the Indigenous population involves assessing the socio-economic status (SES) of the Indigenous population. We have therefore incorporated both Indigenous and socio-economic status issues into this chapter as they are inherently interconnected.

THE 2010 REVIEW APPROACH

- 6 The 2010 Review approach disaggregated population by Socio-Economic Indexes for Areas (SEIFA), State based Accessibility/Remoteness Index of Australia (SARIA), Indigeneity, sex and age. Different combinations of these variables were used for different category assessments.
- 7 The SEIFA disaggregation comprised five socio-economic quintiles ranging from least disadvantaged to most disadvantaged.
- 8 In the 2013 Update, 75% of the Indigenous population were classified as being in either the most disadvantaged or second most disadvantaged socio-economic quintiles.

AREA BASED MEASURES

The use of SEIFA

- 9 In its submission to the 2015 Review, the ACT suggested that SEIFA was failing to capture the true extent of socioeconomic disadvantage in the ACT. This was because using an area based measure underestimated the Territory's low SES numbers. It suggested that the commission use socio-economic indexes for individuals (SEIFI) rather than SEIFA, or that SEIFI be used only for the ACT to overcome this issue.
- 10 Staff agree with the ACT that areas to which SEIFA scores are allocated are not homogenous. There can be some socioeconomic diversity within an area classified to any one of the SEIFA quintiles used by the commission. However, SEIFA does not presume that these areas are homogenous, rather the SEIFA score for any area summarises the socioeconomic distribution in that area.
- 11 Some disadvantaged people live in advantaged areas. However, by using a quintile that represents the socioeconomic distribution within an area SEIFA allows diversity to be captured in a comparable way across States. Our analysis of SEIFI and SEIFA indicates there is no significant bias to using SEIFA.

Where are area measures appropriate?

- 12 In most categories, we use SEIFA as our standard indicator of SES. Our use of SEIFA is not based on an assumption that all low SES people live in low SES suburbs, but rather that low SES suburbs have more low SES people than high SES people. We measure the relative use of services by people in different areas, and this will capture the impact of SES on the use of that service.
- 13 There are some assessments where we consider SES to be a significant driver, but cannot use SEIFA to measure it. For example, we have no information on who uses general welfare services (which are assessed in the Welfare category). We therefore cannot use the data driven assessment that SEIFA allows us to capture. Using judgment, we consider that general welfare services are generally targeted at the 20% of the population with the lowest SES. This is not what SEIFA measures, and staff consider SEIFI a more appropriate measure.

Indigenous measures

- 14 Various approaches to meeting the requirements of the terms of reference have been considered:
 - individual based measures
 - a proxy of Indigenous disadvantage
 - area based measures.

- 15 In addition to these approaches, the Northern Territory suggested that our assessments be based on the pattern of identification at the time of the 2010 Review, the 2006 Census level. It considered revising data based on the new level of identification in the latest census may not be consistent with the principle of HFE. Tasmania considers 'it difficult to see how an outdated data source, such as the 2006 Census data, could be considered more appropriate for use than the more recent 2011 Census data'.
- 16 Staff consider an area based index of disadvantage is the most appropriate means by which to recognise the changing characteristics of the Indigenous population. We accept the universal State view that a proxy of residual disadvantage¹⁰¹ is not a workable solution. We consider that using census data to develop an area based index of disadvantage for the Indigenous population at each census allows for changes in identification patterns between censuses to be appropriately captured in updates within a review period. Thus, we consider using the latest available census is appropriate.
- 17 We consider that further disaggregating the Indigenous population by educational attainment, or some other attribute of individuals has significant drawbacks, but have not yet ruled out that approach. If an Indigenous specific area based measure proves unworkable, staff would consider recommending a judgment based individual measure.
- 18 Western Australia said that Indigenous people usually represent a very small proportion of the population in most areas. As such, they contribute relatively little to the SEIFA scores of those areas. The SES of the Indigenous population in an area is not always related to the SES of the non-Indigenous population in that area, particularly in non-urban areas. As such, they consider that to measure the SES of the Indigenous population, it is important to use only the Indigenous population, rather than the total population in each area. Further, in areas with large Indigenous populations, the non-Indigenous population usually has a very different SES to that of the Indigenous, or total, populations in those areas.
- 19 Western Australia is therefore strongly of the view that separate area based measures of SES should be used for Indigenous and non-Indigenous populations and that this is the most appropriate way of improving the Indigenous assessment.
- 20 The Northern Territory considers that a multi-dimensional aspect of Indigenous need is necessary to appropriately capture the changing characteristics of this population. It supports the use of Indigenous specific area based measures of Indigenous disadvantage.

¹⁰¹ This concept is described in detail in CGC 2012-04 Relative Indigenous Disadvantage

- 21 Some States were not convinced there is a problem with the current method of assessing Indigenous disadvantage. For example, Queensland considers that the relevant characteristics of the Indigenous population and the way these affect expenditure are reflected in the current approach. However, if we are to attempt to comply with the terms of reference, all States accept using area based measures of Indigenous disadvantage is where the commission should invest its efforts.

Conclusion

- 22 Using area based measures is appropriate for most categories as the quintile assigned to an area summarises the socio-economic distribution within that area and hence captures the heterogeneity of SES within a region.
- 23 On the basis of State responses, we consider that the approach most likely to produce a reliable and acceptable method to appropriately capture the changing characteristics of the Indigenous population is an area based measure.
- 24 The area based measure of Indigenous disadvantage would replace SEIFA for the Indigenous population. An area based measure of non-Indigenous disadvantage may also be required.

INDIGENOUS INDEX

- 25 The Centre for Aboriginal Economic Policy Research (CAEPR) at the Australian National University has developed the Indigenous Relative Socio-Economic Outcomes (IRSEO) Index.
- 26 IRSEO is developed using principle component analysis (PCA). It uses Indigenous census data to develop an index. The model selects variables which specifically reflect the nature of Indigenous disadvantage. As such, many of the variables are different from those used in SEIFA. Table 26-1 compares the variables used in IRSEO with those used in SEIFA.

Table 26-1 Comparison of SEIFA and IRSEO variables

Category	SEIFA variables (a)	IRSEO variables
Income	People with stated annual household equivalised income between \$1 and \$20,799 (approx. 1st and 2nd deciles)	Population 15 years and over with an individual income above half the Australian median
Education	People aged 15 years and over whose highest level of education is Year 11 or lower	Population 15 years and over who have completed Year 12
	People aged 15 years and over who have no educational attainment	Population 15 to 24 years old attending an educational institution
		Population 15 years and over who have completed a qualification
Labour force	People (in the labour force) unemployed	Population 15 years and over employed
Occupation	Employed people classified as 'labourers'	Population 15 years and over employed as a manager or professional
	Employed people classified as Machinery Operators and Drivers	Population 15 years and over employed full-time in the private sector
	Employed people classified as Community and Personal Service Workers	
Household	Occupied private dwellings paying rent less than \$166 per week (excluding \$0 per week)	Population who live in a house that is owned or being purchased
	Occupied private dwellings requiring one or more extra bedrooms	Population who live in a house with at least one bedroom per usual resident
	Occupied private dwellings with no cars	
Family	One parent families with dependent offspring only	
	People aged 15 and over who are separated or divorced	
	Families with children under 15 years of age who live with jobless parents	
Other	Occupied private dwellings with no internet connection	
	People aged under 70 who have a long-term health condition or disability and need assistance with core activities	
	People who do not speak English well	

(a) The SEIFA index referenced in this table is the Index of Relative Socio-economic Disadvantage or SEIFA (IRSD).

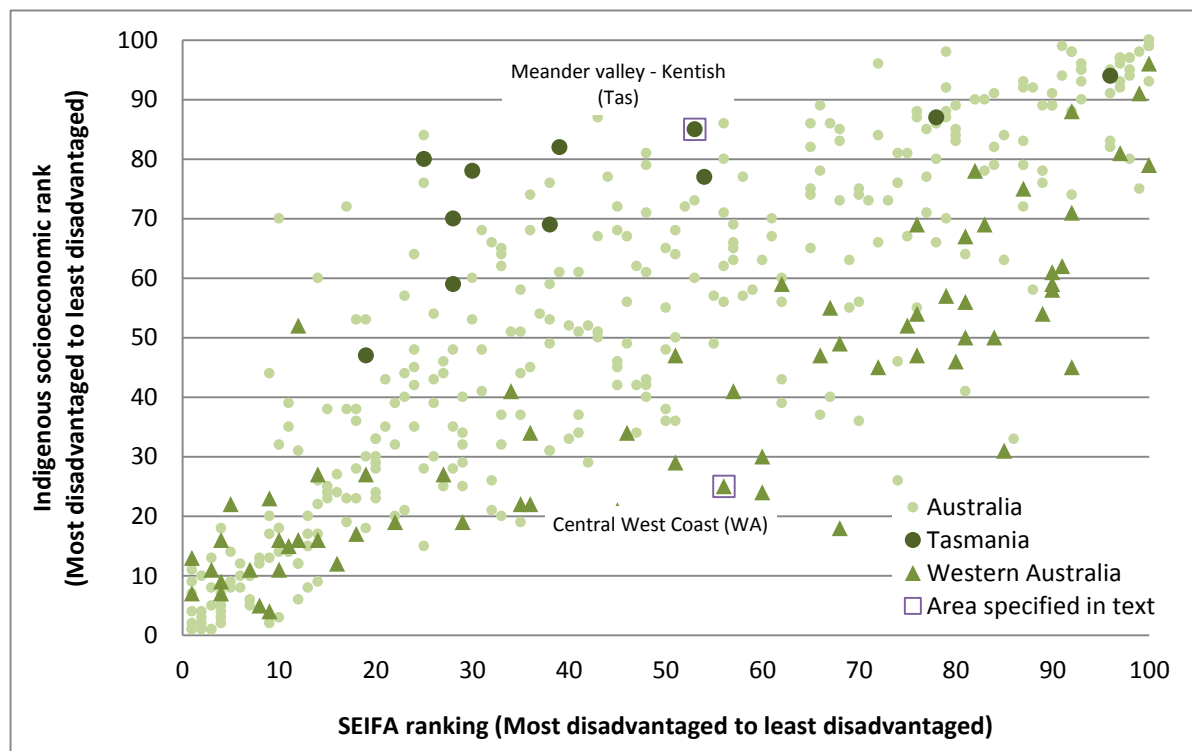
Source: SEIFA 2011 and Biddle, N. (2013), Socio-economic outcomes, CAEPR Working paper.

- 27 There are socio-economic differences between the Indigenous populations in different States. In the 2010 Review, we used SEIFA to capture these differences.
- 28 In *CGC 2012-03 Measuring socio-economic status*, we concluded that SEIFA measured SES for Indigenous people because low SES Indigenous people tend to live in low SEIFA areas, while higher SES Indigenous people tend to live in areas with higher

SEIFA scores. This is shown in Figure 26-1. However, this does not mean that in different States comparable Indigenous people would live in comparable areas.

- 29 Figure 26-1 also suggests that Indigenous people in Tasmania are considerably less disadvantaged than Indigenous people in an area of Western Australia with a similar SEIFA score. For example, Meander Valley — Kentish (Tasmania) and Central West Coast (Western Australia) have SEIFA rankings of around 55 (55% of the Indigenous population live in areas with lower SEIFA scores) but Meander Valley — Kentish is among the least disadvantaged Indigenous communities (85% of Indigenous people live in areas with lower Indigenous relative socio-economic outcomes (IRSEO)), while only 25% of Indigenous people are in communities with a lower IRSEO than Central West Coast.

Figure 26-1 Indigenous socio-economic rank by SEIFA rank, Indigenous areas, 2011



Source: SEIFA 2011 and Biddle, N. (2013), Socioeconomic outcomes, CAEPR Working paper.

- 30 This supports the conclusion that we reached in CGC 2012-04, that disaggregating using IRSEO might lead to a more comparable measurement of Indigenous disadvantage across States than disaggregating the Indigenous population into high and low SES using SEIFA.

Selecting an Indigenous specific area based measure of disadvantage

- 31 Tasmania noted that the variables used in IRSEO (shown in Table 26-1) are measures of advantage rather than disadvantage and Queensland expressed concerns about the level of geography at which the index was produced.
- 32 In the majority of SA1s, the Indigenous population is too small to develop a meaningful socioeconomic ranking for that area. To overcome this issue, IRSEO is developed at the Indigenous Area level. There are 429 Indigenous Areas in Australia.
- 33 Queensland considered an Indigenous SEIFA to be preferable as scores could be attributed to a finer geography. The Northern Territory noted that Indigenous Areas had been used as sufficient data on the Indigenous population was not available at finer geography levels.
- 34 Staff consider that Indigenous Areas are an appropriate geographical unit to use in developing a measure of Indigenous socioeconomics. These areas have a sufficient Indigenous population from which to derive a meaningful index while also being sufficiently small in areas of high Indigenous population to pick up variance in the socioeconomic profile of neighbouring areas.
- 35 Both Queensland and Tasmania advocated producing an Indigenous specific SEIFA (IRSD) index, using the variables used in SEIFA. Staff have done this at the same level of geography used in IRSEO (Indigenous areas). Of the 15 variables that contribute to SEIFA, 4 had negative correlation with the index:
 - Separated or divorced
 - One parent families
 - Aged over 70 with long term health condition or disability
 - People employed as machine operators or drivers
- 36 These variables appear to capture aspects of disadvantage that are specific to non-Indigenous people. As such, we consider that using the standard SEIFA variables to a measure of Indigenous specific disadvantage is inappropriate.
- 37 We agree with Tasmania and Queensland that IRSEO may not use the variables that would best reflect the use of State services. However, there is significant risk and complexity associated with developing an Indigenous specific SEIFA measure, and we do not consider that we have the time available to undertake that work in this review. The key advantages of IRSEO are that it:
 - attempts to capture Indigenous specific measures
 - is a proven and available product.
- 38 States agreed that the development of an Indigenous SEIFA from first principles could not be achieved within the time available for the 2015 Review.

- 39 Staff and most States, consider IRSEO to be a less risky choice than developing an Indigenous specific SEIFA for the 2015 Review. It is available for use immediately and uses variables targeted at differentiating the Indigenous population.
- 40 It is also important to note that we are using socioeconomic measures only as a means of distinguishing high cost and use populations from low cost and use populations. We consider that for many services, particularly welfare, the extent of disadvantage is likely to be the better proxy of use of State services. However, for some services, such as health, the extent of advantage is also likely to have some impact on service use.

Policy neutrality

- 41 In *CGC 2012-04* we stated that ‘of the area-based measures we have considered, IRISO best addresses the issue of differences in [socioeconomic status] between States. However, using this geographical classification leads to the prospect of policy contamination. With 68% of the Indigenous population in the bottom IRISO quintile living in the Northern Territory, the Northern Territory policies on expenditure on Indigenous people would have a major influence on the GST allocated to it.’ A couple of States responded to this in their recent submissions.
- 42 We have since discovered that our 68% estimate was an erroneous interpretation. This was the proportion of the Northern Territory’s Indigenous population in the bottom quintile, not the proportion of the bottom quintile Indigenous population in the Northern Territory. As Table 26-2 shows, only 37% of the most disadvantaged Indigenous nationally are from the Northern Territory, 63% live elsewhere. This reinterpretation has significantly alleviated, but not removed, our concerns about policy contamination.

Table 26-2 State shares of Indigenous population by IRSEO quintile, 2011

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	%	%	%	%	%	%	%	%	%
Least disadvantaged	34	18	30	2	2	6	5	3	100
2nd least disadvantaged	40	5	27	6	7	10	0	5	100
Middle quintile	27	8	38	18	3	1	0	5	100
2nd most disadvantaged	39	4	29	17	9	1	0	1	100
Most disadvantaged	17	0	17	22	7	0	0	37	100
Total	31	7	28	13	6	4	1	10	100

Source: IRSEO and ABS Indigenous ERP

- 43 The Northern Territory does not consider that the use of IRSEO introduces significant policy contamination, as it forms less than half of the most disadvantaged Indigenous

IRSEO category. It also suggests that not employing an Indigenous specific indicator continues policy contamination due to Indigenous needs being unreasonably ‘averaged’ towards the rest of the Australian population.

- 44 New South Wales considers that while the Northern Territory alone may not represent excessive policy contamination, with Western Australia it does represent a significant majority of policy setting for disadvantaged Indigenous people.
- 45 It is not possible to produce an assessment that is policy free, while using internal standards as we do. The impact of one or a few States’ policies on an assessment is proportional to their share of the effected population. For the Northern Territory’s policies to determine 37% of the national average policy on the most disadvantaged Indigenous population is no more policy contaminated than allowing New South Wales’ polices to determine 37% of the national average policy where it has that share of a population group, which it frequently does.

Double counting

- 46 Some States raised concerns about double counting the impacts of remoteness and other factors such as socio-demographic composition. As population is disaggregated between remoteness and other factors, relative need can be calculated in such a way that double counting is avoided.

Conclusion

- 47 Queensland and Tasmania advocated the development of an Indigenous SEIFA. However staff and most States consider that IRSEO is the most appropriate means by which to attempt to meet the terms of reference requirements.

Before making a recommendation to the commission, staff intend to examine the implications and consult with States on:

- replacing SEIFA with IRSEO for the Indigenous population to appropriately capture the characteristics of this population.

NON-INDIGENOUS INDEX

- 48 If we move to using IRSEO, we are then faced with the question of what we should use for the non-Indigenous population. Conceptually, in the interests of symmetry, if the non-Indigenous profile is not affecting the Indigenous measure (IRSEO), then the Indigenous profile should not affect the non-Indigenous profile.
- 49 In most areas, the non-Indigenous population represents a large majority of the total population, and so SEIFA is likely to be a reasonable proxy for the non-Indigenous

population's SES. However, in large parts of the Northern Territory, and in some other parts of the country, this is not the case. As such, we are inclined to use separate Indigenous and non-Indigenous (NIRSEO) indexes.

- 50 Staff and all States consider that NIRSEO would not be an appropriate measure of non-Indigenous socio-economics because:
 - Indigenous areas have broadly similar Indigenous populations, however, they have very different non-Indigenous populations. This means that despite having less than half the non-Indigenous population of the ACT, the Northern Territory has 62 Indigenous areas while the ACT has only 3.
 - IRSEO's component variables reflect the Indigenous experience of disadvantage and may include or exclude indicators which distort the prevalence of non-Indigenous disadvantage.
- 51 **SEIFA 2011.** South Australia was not convinced that a separate measure of non-Indigenous socioeconomic was necessary. It argued that an Indigenous measure alone would meet the requirements of the terms of reference and that SEIFA could be applied to the non-Indigenous population without further modification.
- 52 Staff would be inclined to apply SEIFA to the non-Indigenous population if a non-Indigenous specific SEIFA is not found to be materially different. However, to assess this difference, a non-Indigenous measure must first be developed.
- 53 While staff are not expecting a great deal of difference between non-Indigenous and total SEIFA we are aware that large changes are possible for some areas. In the Northern Territory for instance, 47% of the non-Indigenous population live in areas where the population is more than 10% Indigenous. Removing the Indigenous population from these areas could have a significant and material effect.
- 54 **Non-Indigenous SEIFA.** Most States consider that a non-Indigenous SEIFA should be developed and that socioeconomic indicators specific to this population be weighted accordingly.
- 55 We have therefore commissioned the ABS to produce a SEIFA index using data for the non-Indigenous population.
- 56 The approach recommended by the ABS uses the same initial variable list as SEIFA 2011, but uses the non-Indigenous population to determine the variable weights, allowing the specifics of non-Indigenous disadvantage to be recognised. These weights would then feed into the same index creation process as SEIFA 2011 to produce a new non-Indigenous index. This method would retain the same concept of disadvantage as SEIFA 2011 and would also use SA1s as its geographical basis but be specific to the non-Indigenous population.

Before making a recommendation to the commission, staff intend to examine the

implications and consult with States on:

- replacing SEIFA with an ABS produced non-Indigenous SEIFA for the non-Indigenous population to appropriately capture the characteristics of this population.

57 A draft of the CAEPR paper on IRSEO 2011 is available on the CGC website along with the index. The 2006 Census index paper, and the associated Indigenous and non-Indigenous indexes can be found at:

- <http://caepr.anu.edu.au/Publications/WP/2009WP50.php>

CHAPTER 27 – ADMINISTRATIVE SCALE

2010 REVIEW APPROACH

- 1 The 2010 Review Administrative scale assessment captured the minimum administrative cost that would be incurred for a State with a population size of the smallest State. It included costs associated with:
 - core head office functions of departments (for example, corporate services, policy and planning functions, but not all staffing and other resources delivering these)
 - services that are provided for the whole of the State (for example, the legislature, the judiciary, the Treasury, the revenue office, and a State museum but not all staffing and other resources delivering these).
- 2 As the Administrative scale assessment was intended to capture the cost of providing the minimum level of administration required (that is, the level of expenses incurred by a State with a population size of the smallest State), each State had the same requirement. The appropriate assessment was therefore an equal per State assessment¹⁰², which implied a greater per capita cost for the less populous States.
- 3 The Administrative scale assessment was not an assessment of all fixed costs or ‘non-front line services’. It was an assessment of the minimum fixed cost. Any remaining fixed costs were included in the service delivery component of each expense assessment and assessed according to the disabilities relevant to that component.

ISSUES AND ANALYSIS

- 4 Based on State submissions and staff research, the main issues for the Administrative scale assessment are:
 - establishing the quantum
 - updating the quantum.

State views

- 5 Victoria, South Australia, Tasmania and the Northern Territory consider the administrative scale quantum is out of date and should be updated in this review. Victoria added that if this cannot be achieved a maximum discount should be applied

¹⁰² The ACT receives slightly less because it does not need to provide some services and the Northern Territory slightly more because it requires a dual service delivery mode.

to reflect the uncertainty of the current data, while Tasmania urged the re-launch of the data collection project. The Northern Territory considers the scope of the expenses captured in administrative scale should be reviewed to reflect changes in State circumstances such as costs associated with increases in regulation and legislation, intergovernmental workloads, a wider scope of government service provision and increased use and costs of information technology.

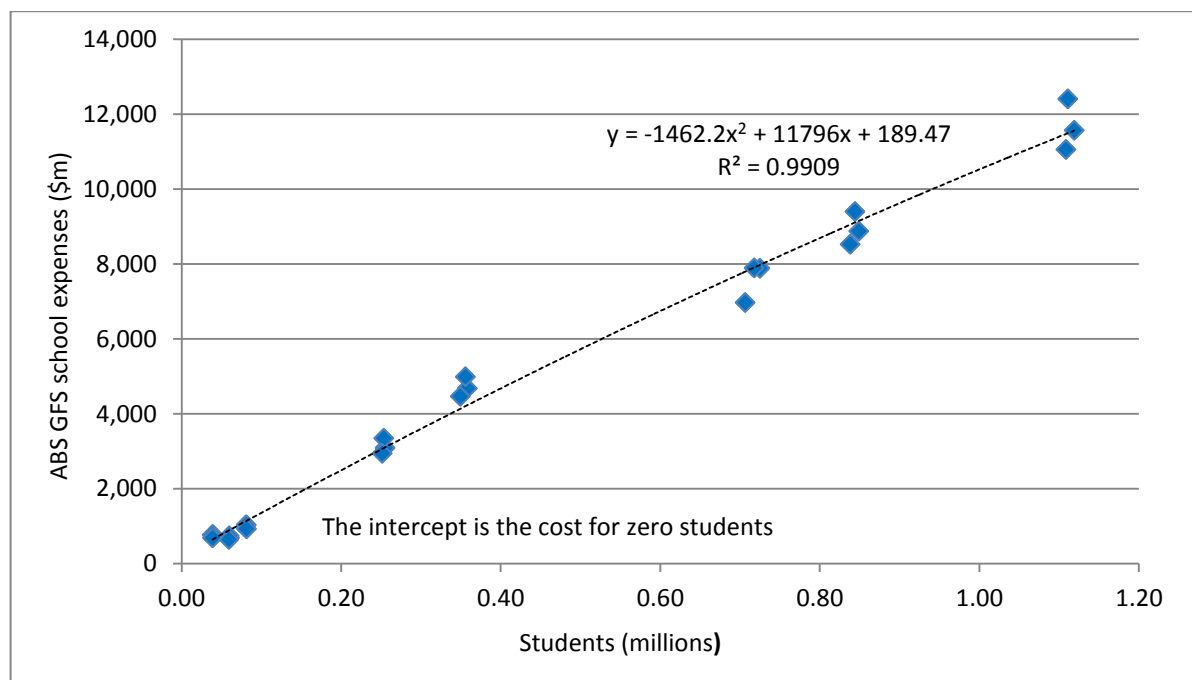
- 6 New South Wales says that administrative scale costs need to be reconsidered to ensure they truly assess the 'minimum costs of administration' and should be independent of any scale of operations, population and the service delivery task.
- 7 Queensland, Western Australia and the ACT do not consider administrative scale a priority issue for this review.

Establishing the quantum

- 8 Staff have explored a number of options for establishing the quantum:
 - collecting State departmental data that would allow a re-estimation of the quantum for one or more categories
 - a regression approach
 - an examination of publicly available data (Productivity Commission and States' annual reports)
 - status quo, which would involve indexing the existing quantum.
- 9 **Collecting State departmental data.** Staff used the Data Working Party (DWP) process to seek detailed State department data. Despite some support from smaller States, no State was able to provide data, due in part to privacy issues concerning detailed workforce data.
- 10 At this stage, we do not consider there is sufficient time to try and re-establish a State data collection process that will be able to provide the detailed data that would enable us to undertake analysis similar to that undertaken in the 1999 and 2004 Reviews. This could be considered a priority for the next review.
- 11 **A regression approach.** The July 2011 DWP proposed a new definition of administrative scale costs for the DWP group to consider. The definition, which had broad support among States, was:
 - administrative scale costs are:
 - the costs incurred by a State in delivering services
 - whilst acting with the average efficiency and following average policy
 - where costs are independent of the size of the service population.

- 12 A regression was investigated as a potential way of mathematically deriving a quantum for administrative scale expenses consistent with the proposed definition. Staff investigated two regression approaches:
- **Using ABS GFS data.** This option would estimate the quantum by regressing GFS school education expenses against students. This would provide an estimate for schools education that could be used as a guide for other functions.
 - **Using Productivity Commission data.** This option would estimate the quantum by regressing out-of-school staff against students. Again, this would provide an estimate for schools education that could be used as a guide for other functions.
- 13 Staff chose schools education because we consider this function to be the most homogenous at the State level and, therefore, likely to be the least affected by State policies.
- 14 **Regression approach using ABS GFS data.** The regression using GFS data is shown in Figure 27-1. The intercept of the regression is the point at which there are no students and so would provide an estimate of the minimum cost of school services.

Figure 27-1 Regression using ABS GFS school expense and students data (2008-09 to 2010-11 combined)



Source: Government Finance Statistics, Australia, (5512.0), 2010-11, for Primary and secondary education and ABS 2010-11 Schools Collection data.

Note: These data include both government and non-government schools data.

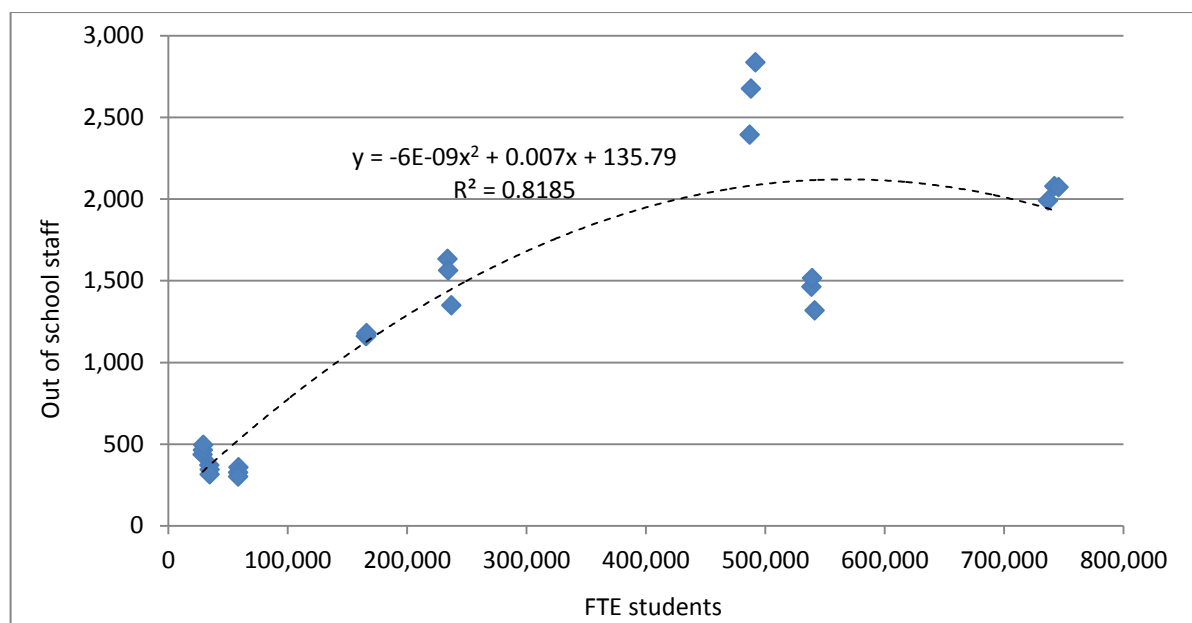
- 15 The form of regression equation used was one consistent with the commission's view that there are economies of scale in providing school services.¹⁰³ The high value of the correlation coefficient indicates a high level of explanatory power of this equation with a State's school expenses.
- 16 Despite the high explanatory power, the regression produces an estimate (\$189 million dollars per State) that is too high to be a realistic estimate of the minimum costs for school education. The ABS GFS school expenses comprise fixed costs and service use costs and this may be why the regression produces such a high estimate. As shown in Table 27-1, the dollar estimate derived from this regression is more than that spent by 6 out of 8 States on out-of-school-staff expenses. It is also much higher than our current figure of \$16 million per State. We do not consider that this approach can be used to determine administrative scale costs.
- 17 **Regression approach using Productivity Commission data.** The second regression used Productivity Commission data on out-of school-staff¹⁰⁴ and student numbers.¹⁰⁵ The out-of-school data more closely aligns with our administrative scale concept. They encompass staff whose tasks are related to head office type activities, rather than staff engaged on front-line service provision (such as teachers or teachers' aides). The results of this regression are shown in Figure 27-2.¹⁰⁶
- 18 The intercept term provides an estimate of the minimum number of out-of-school staff required by each State. In this case, 136 out-of-school staff.
- 19 The national average out-of-school staff yearly wage is about \$101 561 (based on Productivity Commission data for the 3 years 2008-09 to 2010-11). When applied to the 136 out-of-school staff estimate, this provides an administrative scale costs estimate for school education services of \$14 million.

¹⁰³ A form of equation that indicates economies of large scale is a negative quadratic. The correlation coefficient (R^2) of this form was 0.991, higher than for the linear form (no economies of scale) for the same data, at 0.989, and for the exponential form (diseconomies of large scale) at 0.859. These latter forms produced substantially higher intercept values.

¹⁰⁴ Out of school staff are those who usually spend the majority of their time engaged in duties outside schools. These staff may be in State or regional offices and include senior executive staff. Out-of-school employee related expenses represent all salaries, wages awards, allowances and related on costs paid to out-of-school staff.

¹⁰⁵ The Productivity Commission data is sourced from the ABS Schools Australia (4221.0) data collection for student numbers and The Standing Council on School Education and Early Childhood (SCSEEC), (formerly the Ministerial Council for Education, Early Childhood Development and Youth Affairs (MCEECDYA)), unpublished data for staff and financial data.

¹⁰⁶ A form of equation that indicates economies of large scale is a negative quadratic. The correlation coefficient (R^2) of this form was 0.8185, higher than for the linear form (no economies of scale) for the same data, at 0.6871, and for the exponential form (diseconomies of large scale) at 0.688. The linear and exponential lines produce substantially higher intercept figures.

Figure 27-2 Regression using Productivity Commission data on out-of-school staff and students, data for 2008-09 to 2010-11

Source: Data obtained from Productivity Commission, Report on Government Services, 2013, Chapter 4, Tables 4A.1 and 4A.9.

Note: These data are government school staff and students only.

- 20 Staff consider this regression provides a more reasonable indication of school education administrative scale costs. We note the estimate is less than the out-of-school staff expenses for any State (Table 27-1) and close to our current estimate of \$16 million. However, we also note that the out-of-school data covers a broader range of fixed costs (for example, regional office staff expenses), which would mean the \$14 million estimate may be too high. At this stage, staff do not have any way of further disaggregating out-of-school staff data.
- 21 **Productivity Commission data.** Productivity Commission data were obtained on out-of-school staff numbers and expenses. These are shown in Table 27-1.

Table 27-1 School education staff and wage data, 2010-11

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
In-school staff (No.)	69 501	53 543	48 348	26 070	16 421	6 165	3 594	3 918	227 559
In-school staff expenses (\$m)	6 887	4 374	4 242	2 468	1 493	531	376	342	20 714
Out-of-school staff (No.)	2 072	1 317	2 837	1 349	1 179	301	314	493	9 862
Out-of-school staff expenses (\$m)	240	187	265	155	113	27	18	38	1 043

Note: The data are for government school staff and students.

Source: Productivity Commission, Report on Government Services, 2013, Chapter 4, Tables 4A.1 and 4A.9.

- 22 These data show the minimum cost for out-of-school staff expenses across States is \$18 million (for the ACT). As noted above, the Productivity Commission data contain expenses not considered to be administrative scale type expenses (such as regional office staff expenses). The ACT's data would not include these types of expenses.
- 23 **Annual report data.** Staff have examined States' Department of Education annual reports to determine if the information they contain could assist in estimating a reliable administrative scale quantum. Since our concept is a minimum fixed cost, we examined the annual reports of the three smallest States.
- 24 Our intention was to locate information that would provide numbers of staff in Department of Education head offices versus staff that provide front-line services (teachers, teachers' aides, principals and administration staff). We were also looking for information on head office costs and a comparison of teaching versus non-teaching costs.
- 25 Examination of the Department of Education annual reports for Tasmania, the ACT and the Northern Territory showed that this approach poses considerable difficulties. For example, each State has a different departmental structure and reports using different staffing classifications.
- 26 Table 27-2 shows an outline of the structure of the Education department's for Tasmania, the ACT and the Northern Territory. It shows each has a different divisional structure and the detail provided concerning the tasks of staff was insufficient to determine whether the task related to a head office or a frontline school service.
- 27 Non-teaching staff were estimated by subtracting teaching (or school based) staff from total department staff (where provided.) However, it was not possible to determine the range of duties of the non-teaching staff.
- 28 Staff could not locate data on comparisons of teaching versus non-teaching staff costs in the annual reports or department of education budget documents.
- 29 Our preliminary examination of the three smallest States' annual reports and budget documents suggests it unlikely this method will provide a sound basis for obtaining information on head office staff and costs.
- 30 **The status quo.** This is the default position. If a reliable method of re-estimating the quantum is not found, we would continue to index the existing quantum.

Table 27-2 Structure of Education departments

	Tasmania	ACT	Northern Territory
Name of Dept.	Dept. of Education	Dept. of Education and Training	Dept. of Education and Training
Total Dept staff (2011-12)	7 548 (FTE)	5 854 (headcount)	4 647(FTE)
Top level divisions in Dept of Education and staff numbers	1. Early years & schools (5 581 FTE staff) 2. Further education and training (1 565 FTE staff) 3. Corporate services (403 FTE staff)	1. Learning, Teaching & Student Engagement (244 FTE staff); 2. Strategy & Coordination (4 510.6 staff) 3. Tertiary Educ. & Performance (46.6 FTE staff) 4. Corporate Services (111.8 FTE staff) 5. Director general and Deputy Director general (14 staff)	1. Office of the Chief Executive 2. Corporate services 3. Policy Planning and Performance 4. Public school education and training operations 5. Transforming Indigenous education 6. Director remote teaching
Teaching staff	School teachers & Advanced teachers & principals = 4 701 (FTE) Further education and training teachers = 1 565	Teachers & School leaders = 4 100 (headcount staff)	3 842.72 (FTE school based workforce)
Other non-teaching workforce	1 282 (FTE)	1 754 (headcount staff)	804.28 (FTE non-school based workforce)

Source: Tasmania, Department of Education Annual Report, 2011-2012; Northern Territory Department of Education and Training Annual Report, 2011-2012; ACT Department of Education and Training Annual Report, 2011-2012.

Note: The Tasmanian 'teaching staff' data includes teacher numbers for Tasmanian Polytechnic and Academy Colleges (year 11 and 12). The Northern Territory Annual report did not provide staff by divisional sections, however, it was provided by general staff level classification. The ACT appears to include teachers in its Strategy and Coordination Division.

Conclusion

- 31 Staff have investigated a number of methods for re-estimating administrative scale costs. The two approaches based on Productivity Commission data and regression analysis for schools, provide some support for the existing quantum. Staff have not been able to find data on frontline versus head office staff for services other than Schools education. This means we have been unable to test the reasonableness of our administrative scale estimates for other categories.
- 32 Given the timeframe for this review, staff are doubtful there is sufficient time to develop a new method to re-estimate the quantum for this assessment. Two of the approaches considered by the commission provide some support for the existing quantum. Staff propose to retain the status quo and index the existing quantum.

Staff propose to recommend the commission:

- retain the status quo and index the existing quantum.

Indexing the quantum

- 33 Table 27-3 compares the growth, over the last 5 and 10 years, of the composite index¹⁰⁷ and the State and local government final consumption expenditure (SLGFCE) deflator. The table shows there is not much difference between the 2 deflators. The difference is due to the slower growth in the CPI.
- 34 Staff consider that using the SLGFCE deflator provides a reasonable indexation of the minimum costs of providing head office type services. It is readily available, reflects State costs and does not require judgment to be made as was the case with the weightings used in its previous composite measure. Table 27-3 does not provide a strong rationale for changing the method of indexation.

Table 27-3 Comparison of methods of indexation

Period	CPI	LPI	Composite index (20% CPI, 80% LPI)	SLGFCE
	%	%	%	%
2007-08 to 2011-12	15.0	16.4	15.4	15.1
2002-03 to 2011-12	28.2	43.6	40.5	42.2

Source: Commission calculation based on: ABS, 6401.0 Consumer Price Index (CPI), Australia, Tables 1 and 2; ABS, 6345.0 Labour Price Index (LPI), Australia, Table 4a.; ABS, 5206.0 Australian National Accounts: National Income, Expenditure and Product, Table 4. Expenditure on Gross Domestic Product (GDP), SLGFCE chain price index.

Staff propose to recommend the commission:

- update the quantum of expenses using the ABS State and local government final consumption expenses deflator.

Presentation of Administrative scale assessment

- 35 In the 2010 Review, administrative scale expenses were identified in each relevant category and assessed within that category. To simplify the presentation of this assessment, staff are proposing to assess all administrative scale expenses in a single component of the Other expenses category. The expenses for the former categories would be reduced by the amount of administrative scale expenses removed. This change is presentational and would not impact on GST distributions.

¹⁰⁷ The composite index gave a 20% weight to the CPI and an 80% weight to the LPI.

Staff propose to recommend the commission:

- for presentational purposes, include all administrative scale expenses in the Other expenses category rather than assessing them in a number of categories.

PROPOSED ADMINISTRATIVE SCALE EXPENSES

36 Table 27-4 shows the adjusted administrative scale expenses for 2011-12. The table reflects the category structure in the 2010 Review, not the proposed 2015 Review category structure.

Table 27-4 Adjusted Administrative scale expenses, 2011-12

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Schools education	16	16	16	17	16	15	17	18	130
Post-secondary education	9	8	8	9	8	8	9	10	69
Admitted patients	12	11	11	12	11	11	12	13	94
Community & other health	10	10	10	11	10	10	11	12	83
Welfare and housing	17	17	17	18	17	16	18	21	141
Services to communities	4	4	4	4	4	4	3	4	29
Justice services	24	23	23	24	23	23	24	25	188
Roads	4	4	4	5	4	4	5	5	35
Transport services	4	4	4	4	4	4	3	4	31
Services to industry	24	24	24	25	24	23	17	26	187
Other services	113	110	110	117	110	108	116	118	902
Total	237	231	231	245	230	227	233	255	1 889

Note: Administrative scale expenses in the table have been indexed by the SLGFCE, and adjusted for superannuation, for the ACT and the Northern Territory, and by interstate wages.

CHAPTER 28 – INTERSTATE WAGES

2010 REVIEW APPROACH

- 37 In the 2010 Review (and earlier reviews), the commission decided some of the differences in interstate wages were due to differences in labour markets that were beyond the control of State governments, a disability existed and it should be assessed.
- 38 The commission estimated differences between States in wages using an econometric model of wages of private sector employees from the ABS's Survey of Education and Training (SET). These differences were adjusted in each update using the relative change in the ABS's private sector Labour Price Index (LPI). The 2009 SET became available in 2010 and was used in the 2011 Update.

ISSUES AND ANALYSIS

- 39 The major issues to be considered for this assessment are:
- Does the conceptual case for a wages assessment continue to exist?
 - Do private sector wage levels differ between States?
 - Do the wage levels faced by the public sector reflect pressures in the private sector labour market?
 - How does the public sector respond to this pressure?
 - How should interstate wage differences be assessed?
 - Should differences be measured for capital city or whole of State wage levels?
 - Are adjustments needed for the wages assessment?
 - Ageing data and the appropriate discount.

DOES THE CONCEPTUAL CASE FOR A WAGES ASSESSMENT CONTINUE TO EXIST?

- 40 In past reviews, the commission assessed interstate differences in public sector wages on the basis that interstate differences were partly beyond the control of State governments. It has done this on the basis that employers pay different wages for comparable employees in different States due to differences in cost of living, the attractiveness or otherwise of the location or competition for labour.
- 41 This chapter considers if differences in private sector wages apply pressure on public sector wage setting processes and if so how States might respond to this pressure.

We also consider whether differences in private sector wage levels can be used as a policy neutral measure of public sector wage differences.

Do private sector wage levels differ between States?

- 42 In the 2010 Review, the commission used private sector wages to measure the drivers of interstate public sector wages. Figure 28-1 shows how private sector State relative wage levels for comparable employees can vary considerably between States. We consider this to be compelling evidence that otherwise comparable employees in different States earn different amounts.

Figure 28-1 Relative private sector wage levels for comparable employees, 2009



Note: Wage levels are relative to national average wage levels.

Source: SET 2009.

Do the wage pressures faced by the public sector reflect pressures in the public sector labour market?

- 43 In the 2010 Review, private sector wages were used as a policy neutral measure of interstate differences in the pressures on public sector wage levels. This assumption is based on the theory that private sector wage levels are freely determined by market driven influences and that public sector wages face these same pressures. Although differences in public sector wage levels are heavily influenced by State policies, it was accepted by the commission that circumstances beyond the control of State governments also drive some of these differences.
- 44 Some States did not accept there was a relationship between private sector wage differentials and public sector wage differentials. South Australia said that for a range

of public service occupations (police, teachers and nurses) there are limited job opportunities in the private sector.

- 45 2011 Census data show that around 30% of people with nursing or teaching qualifications worked outside both the public sector and their profession. While there was a small degree of variability between States, the proportion of people with nursing qualifications who worked in the private sector in an occupation other than nursing ranged from 22% to 30%.
- 46 This suggests that in all States labour mobility exists between the public and private sectors. As such, we presume States must offer wages to teachers and nurses that reflect the competition for these workers from outside the industry. This does not support the view that there are limited job opportunities for people in these occupations in the private sector.
- 47 This evidence supports a view that pressure exists between comparable people in public sector or private sector labour market settings.

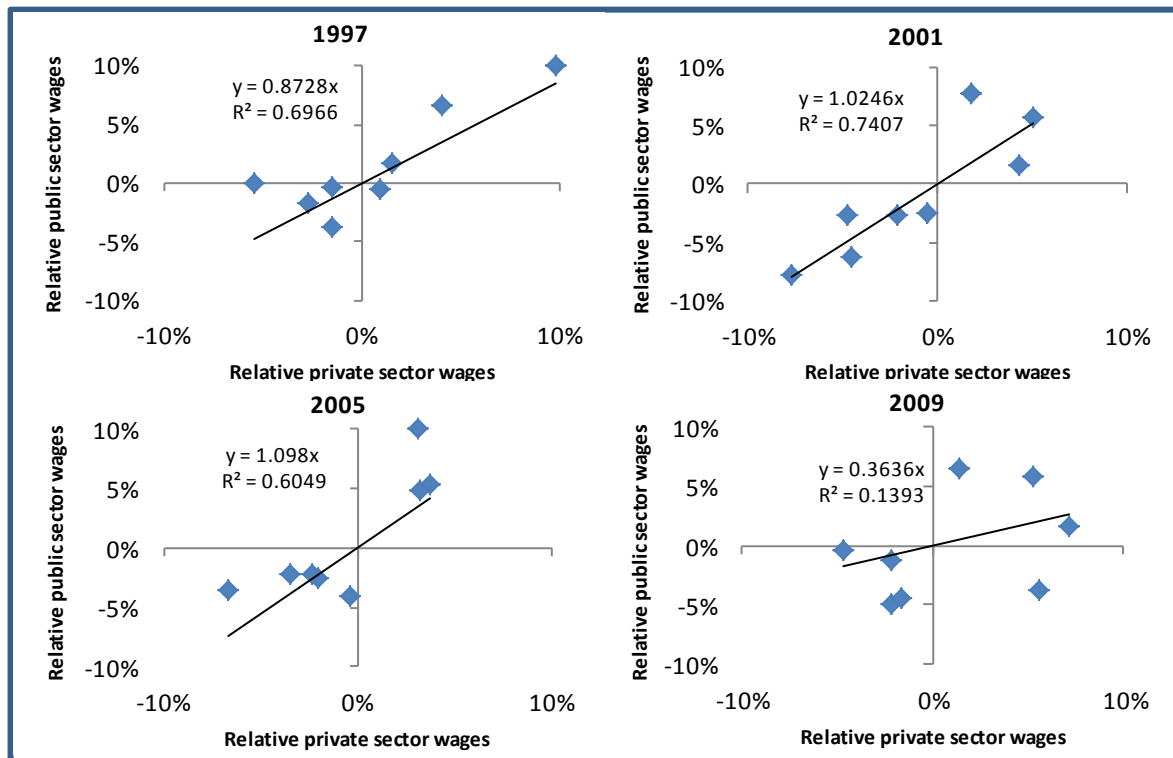
How does the public sector respond to this pressure?

- 48 Even if we accept that the private sector labour market places pressure on public sector wage bargaining, to make an assessment we must still consider that ‘what States do’ is to respond to this pressure.
- 49 Victoria believes private sector wages as currently used by the commission are not a reasonable proxy for measuring interstate differentials in the pressures on public sector wages. They said applying private sector differentials overstates the scale of the required adjustment to public sector wages.
- 50 Queensland said the 2009 SET regression results show the relationship between public and private sector wages has deteriorated. Tasmania said the use of private sector wages as a policy neutral indicator is flawed.
- 51 **Analysis.** While differences in private sector wage levels have been considered a good proxy for differences in public sector wages levels, the strength of this relationship may have diminished in recent years.
- 52 Data from the SET in 1997, 2001 and 2005 have shown that States where private sector wages are above average also had above average public sector wages. Figure 28-2 shows this relationship. This general relationship is consistent with the proposition that the same underlying factors affect relative wages for both sectors. This correlation weakened in 2009.¹⁰⁸

¹⁰⁸ Staff investigated the impact of adjusting 2009 SET by the LPI for the years 2009-10 to 2011-12 to see if the relationship between public and private sector wages continued to evolve. We found that the LPI has only a small effect. The relationship between public and private sector wages as shown by the 2009 SET results is largely unchanged when update by LPI for the years 2009-10 to 2011-12.

- 53 Staff have considered 2 explanations for the weakened relationship in the 2009 SET:
- lags in the responsiveness of public sector wage setting
 - there has been a move to a national labour market.

Figure 28-2 Comparison of relative wages levels in public and private sectors as measured by SET

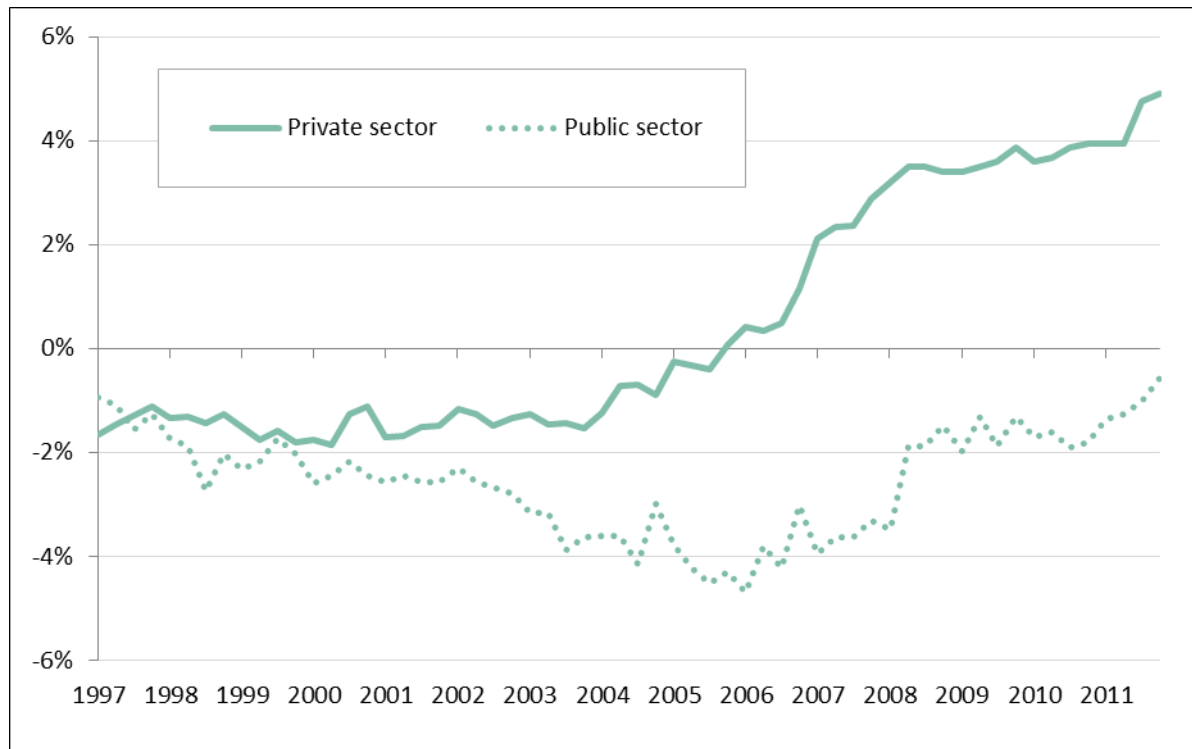


Source: Commission analysis of ABS SET 1997, 2001, 2005 and 2009.

- 54 **Lags in the responsiveness of public sector wage setting.** The weakening relationship between public and private sector wages can be illustrated by the experience of Western Australia. The growth in the mining sector contributed to an increase in private sector wages. While Western Australia's private sector wages have risen to well above average, public sector wages have remained below average.
- 55 Figure 28-3 shows Western Australia's public and private sector wage relativities. The two have diverged. While private sector wages have grown faster than the national average, public sector wages did not. So while at the beginning of the period they were both slightly less than average, private sector wages are now well above average and public sector wages still slightly below.
- 56 Since around 2006, Western Australia's relative public sector wages appear to be trending upwards towards the average. This suggests that, along with a policy choice to exercise greater wage restraint than average, there may have been a lag in the responsiveness of public sector wage setting. A lag in Western Australia's public

sector wage setting might contribute to the weakened relationship between public and private sector wages observed in 2009 SET. However, this also suggests that the relationship is likely to hold in the long term.

Figure 28-3 Western Australia wage relativities, 1997 to 2012



Note: Growth in the public and private sector Labour Price Indices relative to the growth in national public and private sector Labour Price Indices, adjusted to equal the average public and private sector relativities measured by SET in 1997, 2001, 2005 and 2009.

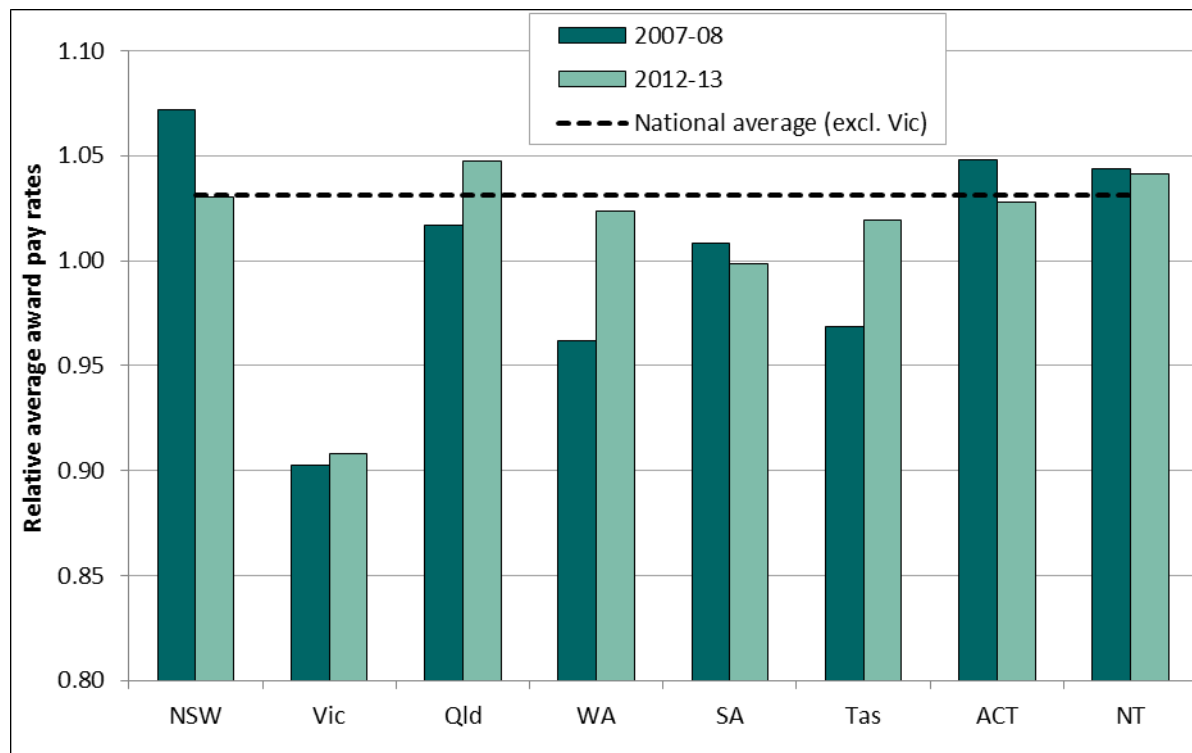
Source: Commission analysis of ABS SET 1997, 2001, 2005 and 2009; ABS LPI 2012 release.

- 57 **A move to a national labour market.** Victoria and the ACT accept there are underlying differences in wages between States and that they should be assessed in a policy neutral way. The Northern Territory argues that interstate wage differences should be assessed because it faces substantially higher wage costs than other States.
- 58 Queensland said States set wage levels that are commensurate with other States. South Australia argued wage levels of public sector employees are heavily influenced by labour markets in other States, rather than by generic local labour market influences. Tasmania said interstate public sector wages are moving towards parity.
- 59 Some States argued that the Australian public sector labour market is inherently national in nature. This theory presumes employers in different States pay the same wage for comparable employees.
- 60 In the 2010 Review, we showed that award rates of pay for registered nurses varied significantly between States. Figure 28-4 shows by 2013, these pay rates had

converged, with only Victorian nurses apparently earning significantly less than nurses in other States. While there are still differences in interstate wage levels, they are not as significant as they were in 2007-08.

61 The award rates of pay for nurses may be moving toward a national labour market.

Figure 28-4 Relative award rates of pay, registered nurses, 2007-08 and 2012-13



Note: Due to concerns about the comparability of Victorian data, a national average excluding Victoria has been shown, in addition to the national average (relativity of 1).

Source: Australian Nurses Federation, Nurses' Paycheck.

62 Figure 28-5 shows the average variation in interstate wage levels relative to the national average wage for each sector. It shows interstate public sector wage variance has been relatively stable since 1994 (rather than declining which would be observed if there were a trend towards a national labour market).

63 Figure 28-5 also shows interstate private sector variance tends to be larger than public sector variance. The ABS's Average Weekly Earnings (AWE) dataset does not control for structural differences in State labour markets. Therefore, the data used in this analysis have not been standardised. The occupational structure of the public sector tends to be relatively similar between States. Therefore, this measure of variance primarily reflects wage differences for similar occupations. However, in the private sector, in addition to wage differences, there are much larger structural differences between the States' private sector economies.

- 64 Victoria argued that while the variation in public sector wage levels has remained relatively constant, the variation in private sector wages has increased suggesting private sector wages increasingly overstates the differences in public sector wage pressures.
- 65 However, when Western Australia is excluded from the private sector estimation of variance from the average we observe that there is very little divergence in variance between the sectors. This suggests much of the divergence is driven by the West Australian government exercising wage restraint during a period of increasing private sector wage levels.

Figure 28-5 Average relative variance in interstate wage levels



Source: Australian Bureau of Statistics, Average Weekly Earnings, Full Time Adult Total Earnings, Cat. No. 6302.0.

- 66 The theory that there has been a move to a national labour market in public sector occupations could explain a weakening in the relationship between public and private sector wages. However, 2009 SET results in Figure 28-2 also provide us with evidence about a transition to a national labour market in the public sector. A national labour market in the public sector would result in differences between State public sector wage relativities diminishing, and the points converging to the x axis, although not to the y axis. This is not what we have observed.
- 67 **Summary.** While the interstate variation in award rates of pay for registered nurses has lessened, 2009 SET and average weekly public sector earnings suggest that there

has not been a move to a national labour market. The public sector wage setting mechanisms may respond to market forces with a lag. The experience of Western Australia shows that this may be the case. However, in the long term we expect that the relationship still holds.

- 68 Figure 28-2 shows that both private and public sector wage levels vary. Differences between States in public sector wages are likely to reflect differences in private sector wage levels and policy choices of the States. The weakening of the relationship shown in Figure 28-2 over time is more consistent with an increasing divergence of State policies rather than a move to a national labour market.
- 69 On this basis, staff consider that interstate differences in private sector wages remain an appropriate proxy for interstate differences in pressure on public sector wages.

Staff propose to recommend the commission:

- continue to consider that interstate differences in private sector wages remain an appropriate proxy for measuring interstate differences in public sector wages.

HOW SHOULD INTERSTATE WAGE DIFFERENCES BE ASSESSED?

- 70 If we are to assess interstate wages, the appropriate method for measuring it should be considered.
- 71 Both the ACT and the Northern Territory said they supported the current approach to the wages assessment.
- 72 Victoria believes the current assessment approach is unduly complex, based on unsound data and not reflective of actual costs faced by States. It argued that the ageing SET is unfit for purpose. It also said the standard errors for the small States, the ACT in particular, gives rise to a high level of uncertainty. Victoria suggested that a cost of living index could be a more appropriate way of measuring interstate wages.
- 73 South Australia said the regression model potentially suffered from omitted variable bias caused by unmeasured regional differences in human capital capability that might account for some variation in interstate wage differences.
- 74 During the development of the 2010 Review methods, States were universal in their view that if interstate wages were to be assessed, then the SET regression was the most appropriate approach.
- 75 In the 2015 Review, the SET data will be quite dated. In this context, Victoria has raised the prospect of using a spatial cost of living index to measure pressure on wages. Even if we were to accept that cost of living was a reasonable proxy for wage

pressures, staff are concerned that no reliable spatial index has been identified. We are also concerned that a cost of living index is not an appropriate measure of wage pressures. For example, house price variation partly reflect differences in wage levels, but also represent a range of supply factors and short term housing market volatility.

- 76 In response to South Australia's concern, staff consider the model controls for most measurable differences in productivity, including most forms of human capital. As is the nature of regression analysis and limited data availability not every conceivable variable can be included in the model and therefore there will be some degree of omitted variable bias. However, we have no reason to consider that any particular State should be disadvantaged by this. It is as likely to understate as overstate South Australia's wage level. In the past, the commission has used a discount to account for uncertainty in the model.
- 77 Staff consider that the current regression model is complex and can be simplified. Currently, the model includes 137 variables, some of which do not add significant explanatory power but do add to the complexity of the model. Staff will investigate whether a simpler and more transparent model specification can produce a reliable estimation of interstate wage levels. If so, States will be consulted on the proposed simplified model.
- 78 The 1997, 2001, 2005 and 2009 SET surveys have been used to estimate wage factors in the previous GST inquiries. However, the ABS has concluded that declining user interest does not warrant continuing the SET.
- 79 The ABS plans to initiate a Characteristics of Employees (COE) survey annually from 2014. This survey is expected to contain all explanatory variables used in the SET regression, have a significantly larger sample size and be conducted annually. This represents a significant improvement in the quality of the data used in this assessment. The increased sample size of COE will reduce the uncertainty of the model as measured by the standard errors of the State coefficients, while the annual collection will both increase the effective sample size used in the estimation, and will remove the need for updating using LPI.
- 80 However, data from the COE will not be available until the 2016 Update. Staff share Victoria's concern that 2009 SET, updated by LPI, will be quite dated by the 2015 Review. We consider that the decision about the appropriate level of discount should be made later in the review period, once we have resolved the range of issues associated with this assessment.

Staff propose to recommend the commission:

- measure the interstate wage disability through an econometric model of the private sector wage differentials, using the COE
- continue using the 2009 SET, updated by LPI, until the COE is available
- investigate whether a simpler and more transparent model specification can produce a reliable estimation of interstate wage levels.

Capital city or whole of State?

- 81 The interstate wages assessment in the 2010 Review used the private sector wage level of comparable employees in each State to measure the relative wage levels at which States could employ staff. The purpose of this section is to consider whether using the average private sector wage level for the whole State is the most appropriate benchmark for estimating public sector wages. No State has raised this as an issue.
- 82 Using State average private sector wage relativities as a proxy for State average public sector wage relativities gives States the capacity to pay wages at the same difference from the national average as the private sector pays in different regions.¹⁰⁹ That is, States can pay public servants more than average in regions where private sector workers are paid more than average such as Sydney and regional Western Australia; and States can pay public servants less than average in regions where private sector workers are paid less than average.
- 83 However, this is not necessarily what States do. States generally pay comparable public servants a single wage set in a State-wide agreement. A State may have some regions where private sector wages are below the national average and other regions where private sector wages are above the national average. However, it negotiates a constant wage across the State. Whether it does this at the State average private sector level, as the current assessment assumes, or at some other level is worth considering.
- 84 While it is a policy choice for a State to negotiate constant wages across the State, it appears to be one shared by most States. What States appear to do is to negotiate State-wide agreements with their staff, and set a wage level for the entire State.
- 85 The level at which States set their wages is, presumably, one at which they can recruit and retain staff in most locations. During the 2010 Review, we found that the Australian Government has national wage rates for some jobs, paying the same wage for the same position everywhere in the country. For example, Centrelink said it sets its wage rates at levels that enable it to recruit staff in most areas. In some areas,

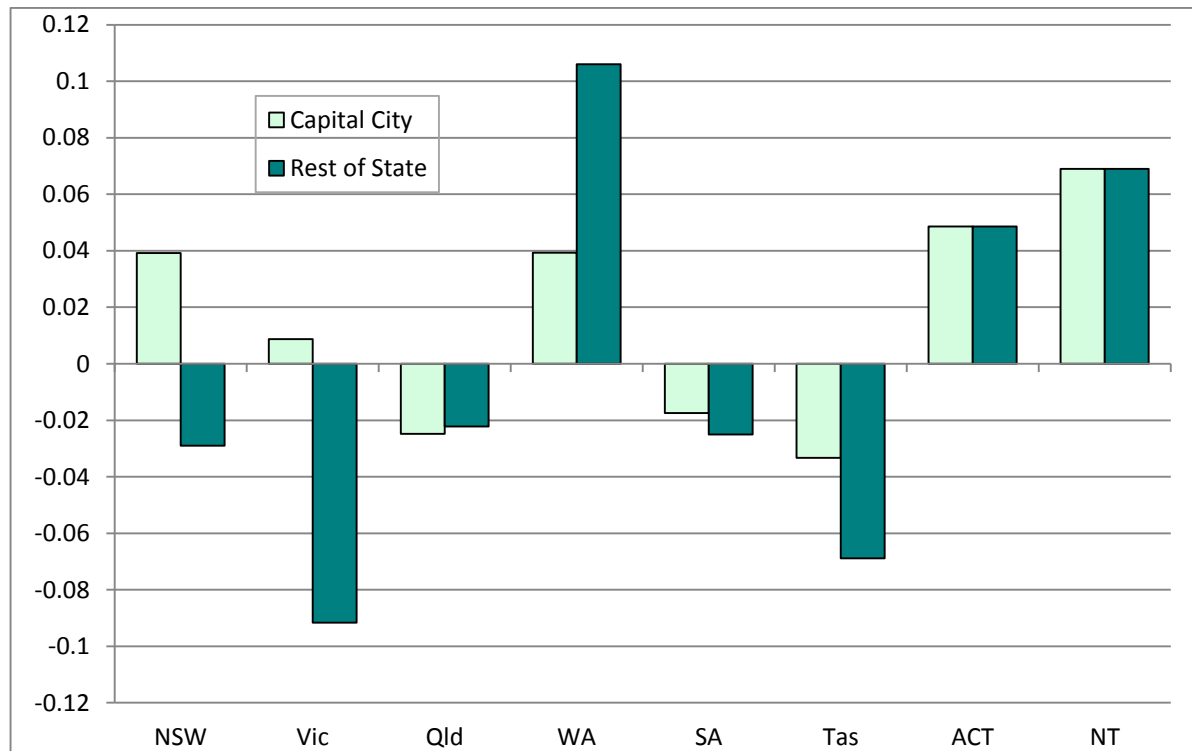
¹⁰⁹ Assuming that the proportion of workers in the public sector is comparable across different regions in each State

Centrelink could fill all available positions at a lower wage, but it chooses to have a national wage rate. In some regions, it is easier to fill positions than in other regions. This has some impact on where it locates services. For example, Centrelink chose to relocate one of its national call centres from Western Australia to Tasmania. This relocation did not lower its wages bill, but did make it easier to fill positions. In order to recruit and retain staff in most areas Centrelink presumably sets a wage at, or close to, that of the highest wage region. By doing so, Centrelink has competitive or attractive wages in most areas. We presume States follow a similar process to determine and maintain State-wide wages.

- 86 If States pay wages based on State-wide agreements, then assessing public sector wage differences based on the State-wide average private sector wage level is not consistent with how public sector wages are determined. Rather, public sector wage differences might be more accurately assessed against private sector wages where they are the highest in each State. In most States, this is in the capital cities.

Do States pay the same wage throughout the State?

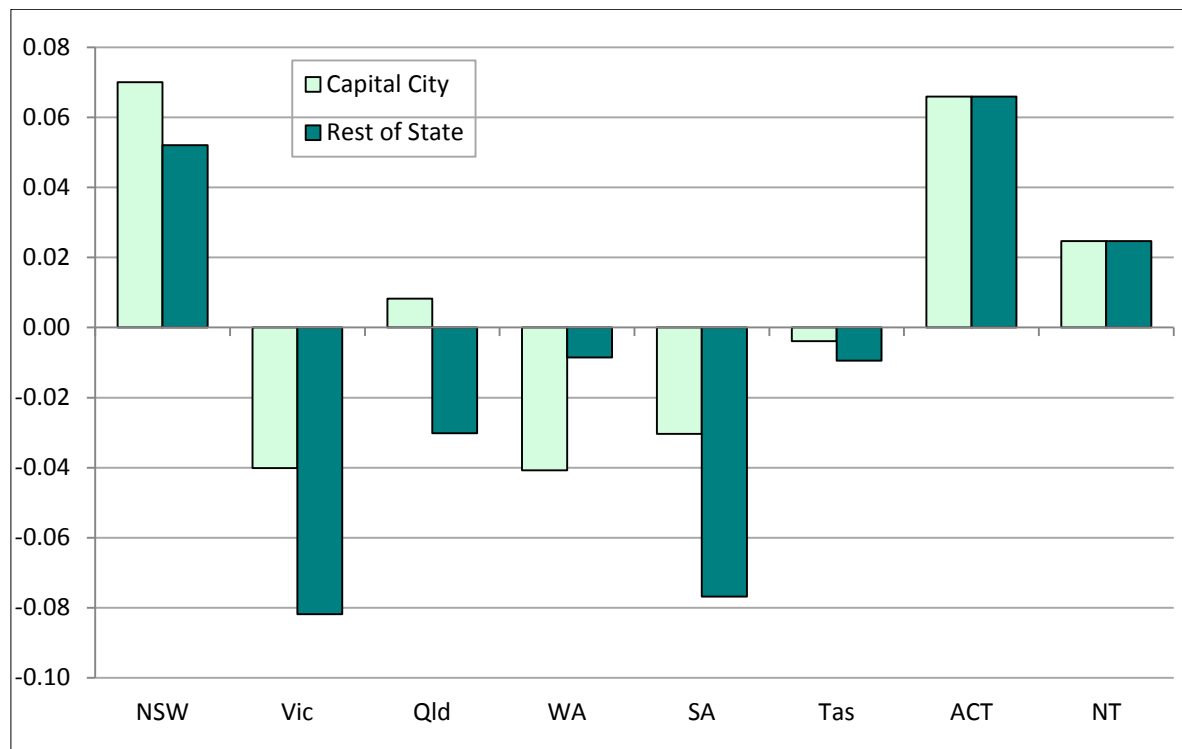
- 87 Our research of State policies has shown, at least for teachers and nurses, State-wide agreements set a single wage for the entire State. If New South Wales' State-wide agreements set teachers or nurses wages at 1% above the national average (its average difference from the national average), New South Wales would not be able to compete for staff in the Sydney labour market where private sector wages are 4% above the national average, as shown in Figure 28-6.
- 88 Figure 28-6 shows 2009 private sector SET results for capital cities and the remainder of the State. It shows that there are significant differences between the private sector wage levels in capital cities and those in the rest of the State, with private sector wages generally higher in capital cities than in regional areas.

Figure 28-6 Relative private sector wages for comparable employees by region, 2009

Note: Data are not available to split the ACT and the Northern Territory, so capital city estimates for these States reflects the whole of State wage levels.

Source: 2009 SET.

- 89 Figure 28-7 shows 2009 public sector SET results for capital cities and the remainder of the State. It shows that the differences in wages between capital city and rest of State are not as large in the public sector as in the private sector. In fact in most States, the differences between capital city and regional public sector wages are not statistically significant.
- 90 While private sector wages differ in capital cities to the rest of State, this difference is not significant in the public sector. Public sector wages are more homogenous between capital cities and the remainder of the State than private sector wages, suggesting that States do use whole of State agreements considerably more than the private sector does.

Figure 28-7 Relative public sector wages for comparable employees by region, 2009

Note: Data are not available to split the ACT and the Northern Territory, so capital city estimates for these States reflects the whole of State wage levels.

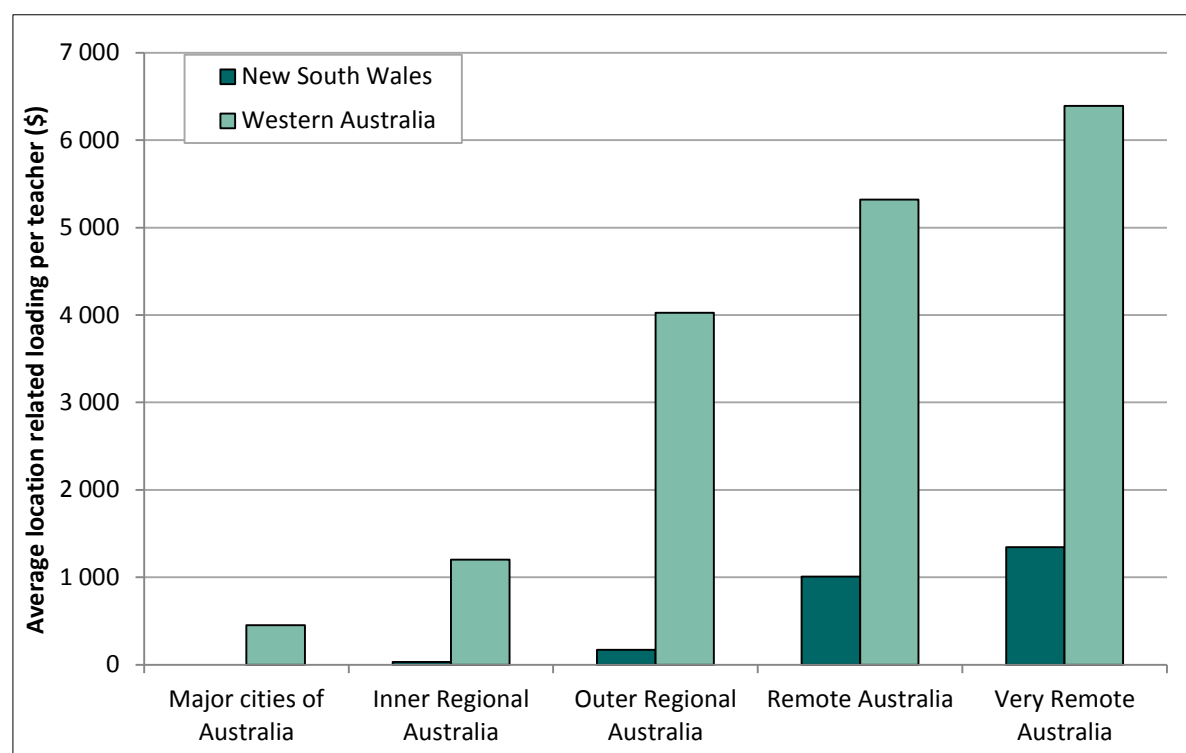
Source: 2009 SET

Proposed assessment

- 91 In determining wage levels, a State must consider the wage level which will allow it to recruit staff in most areas of the State. In most States, the capital cities have the highest private sector wage level. In States where regional private sector wages are high (Western Australia), public sector employees are offered regional loadings.
- 92 Figure 28-8 shows analysis of New South Wales' and Western Australia's teacher certified agreements that shows that is what at least some States do. This suggests the State-wide agreement wage level is likely to reflect the private sector wage level prevailing in the capital cities while additional regional allowances may be offered to remote employees.
- 93 Because Western Australia's private sector wages in regional areas are considerably higher than in Perth, offering regional Western Australian staff Perth wages may mean that it may not be able to retain staff in these areas. In this case, staff consider it would most likely offer a regional loading in more areas, or at higher levels, than other States do, to ensure that regional wages were competitive with local private sector wages (as shown in Figure 28-8). This would mean Western Australia would offer Perth wages in Perth and regional wages in regional areas.

- 94 While it would be possible for New South Wales to set its wages at regional levels, and offer regional allowances in Sydney, that does not seem to be what States do.

Figure 28-8 Average location related loadings paid to teachers in New South Wales and Western Australia, 2012



Note: Loadings only relate to remoteness or similar allowances. Career progression opportunities, subsidised housing and other in-kind support are excluded.

Source: New South Wales and Western Australia teachers' enterprise agreements. New South Wales: <http://www.dec.nsw.gov.au/about-us/careers-centre/school-careers/teaching/our-programs-and-initiatives/explore-your-future/teaching-in-rural-nsw/incentive-schools>
 Western Australia: <http://det.wa.edu.au/labourrelations/detcms/navigation/awards-and-general-agreements/?oid=MultiPartArticle-id-2757333>

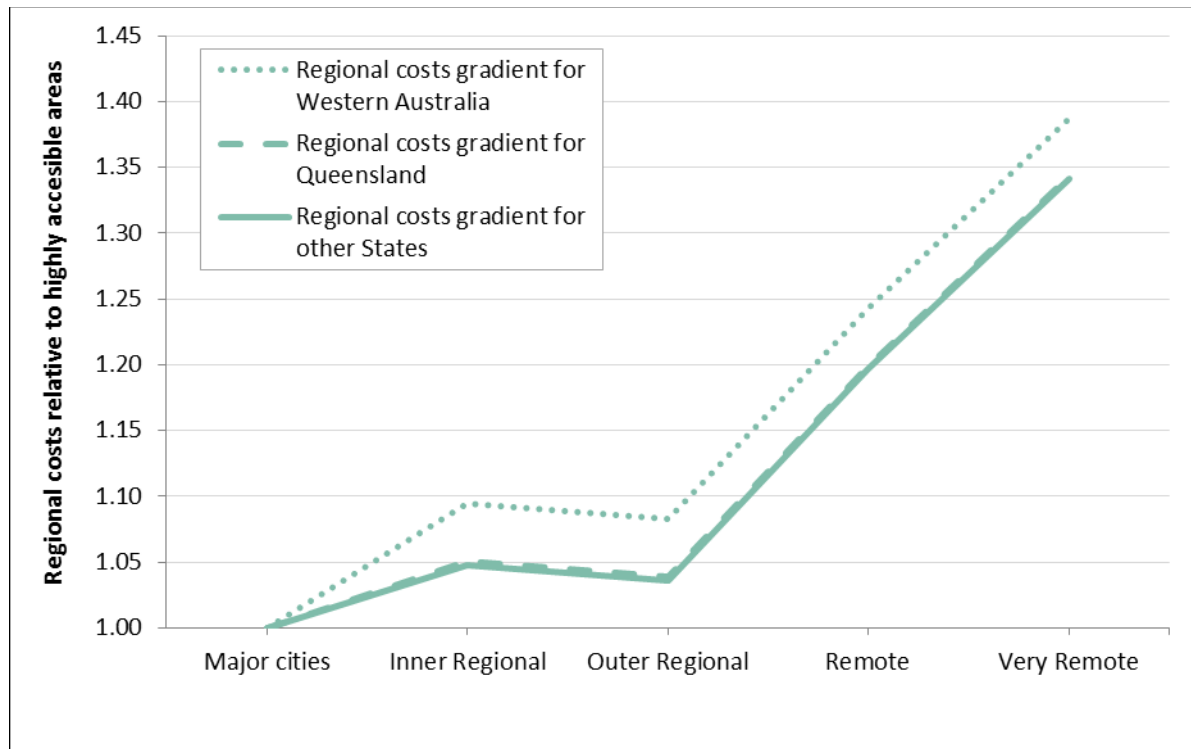
- 95 This suggests we should give each State an interstate wage factor based on capital city wages. Outside of capital cities, we recognise that States with high private sector wages in regional areas, in particular Western Australia, pay loadings above this base wage rate. This State specific regional wage loading is in addition to the national average based regional cost assessment.

State specific regional wage loadings

- 96 A State specific regional cost gradient is an issue raised in the context of the Regional costs assessment, and is an idea proposed by Western Australia. The merits of this assessment are briefly considered in the Regional costs chapter. However, because of interaction with staff's proposal to change from a whole of State to a capital city basis

for the wages assessment the mechanics of our proposed State specific regional wage loading assessment is considered here.

- 97 We consider that the capital city private sector wage level reflects the relative wage levels at which States would (under policy neutral settings) set their base wage levels. Outside of capital cities, we consider that States would pay loadings above the base wage rate to public sector employees in regional areas. These loadings are assessed in the Regional cost assessment. For most States, this means that in regional areas public sector wages are higher than private sector wages. For States with high regional private sector wages, we assume that under average policy States would pay regional loadings plus an additional allowance to compete with high regional private sector wages. For these States we consider that they require additional State specific regional loadings.
- 98 Staff propose that a State specific regional loading be assessed for States with high regional wages based on the difference between the rest of State private sector wage level and the capital city private sector wage level. From the 2009 SET, such an assessment would affect Western Australia and, to a significantly lesser extent, Queensland.
- 99 Figure 28-6 indicates, in a policy neutral setting, Western Australia needs to pay higher regional loadings than other States. Western Australia's higher than average regional private sector wages increase the regional wage levels calculated through the regression of Australia Curriculum, Assessment and Reporting Authority (ACARA) data in the Regional cost assessment. To assess Western Australia as needing both a State specific regional loading and a national average regional loading that includes its actual loading could result in double counting.
- 100 As Figure 28-6 shows, Western Australian wages outside of Perth are 7% higher than in Perth itself. Applying the regional cost gradient to Western Australia in addition to this adjustment would provide the State with an additional weighting for remote areas. However, Western Australia only contributes around 10% of the sample to the overall regional cost model and it does not materially affect the coefficients for remoteness. Ideally, we would like to use only one model to produce estimates of regional costs, service delivery scale, Indigeneity and SES. This model is discussed in *Technical appendix 1: Deriving cost weights from ACARA data*. As including Western Australia in the regional costs model is not likely to result in material double counting, we recommend that, in the interests of simplicity, the model include all States.
- 101 The State specific regional loadings will result in a different regional costs curve for Western Australia and Queensland. Figure 28-9 shows how these two impacts fit together to make this adjustment. The State specific loading is applied only to the wage component of State costs.

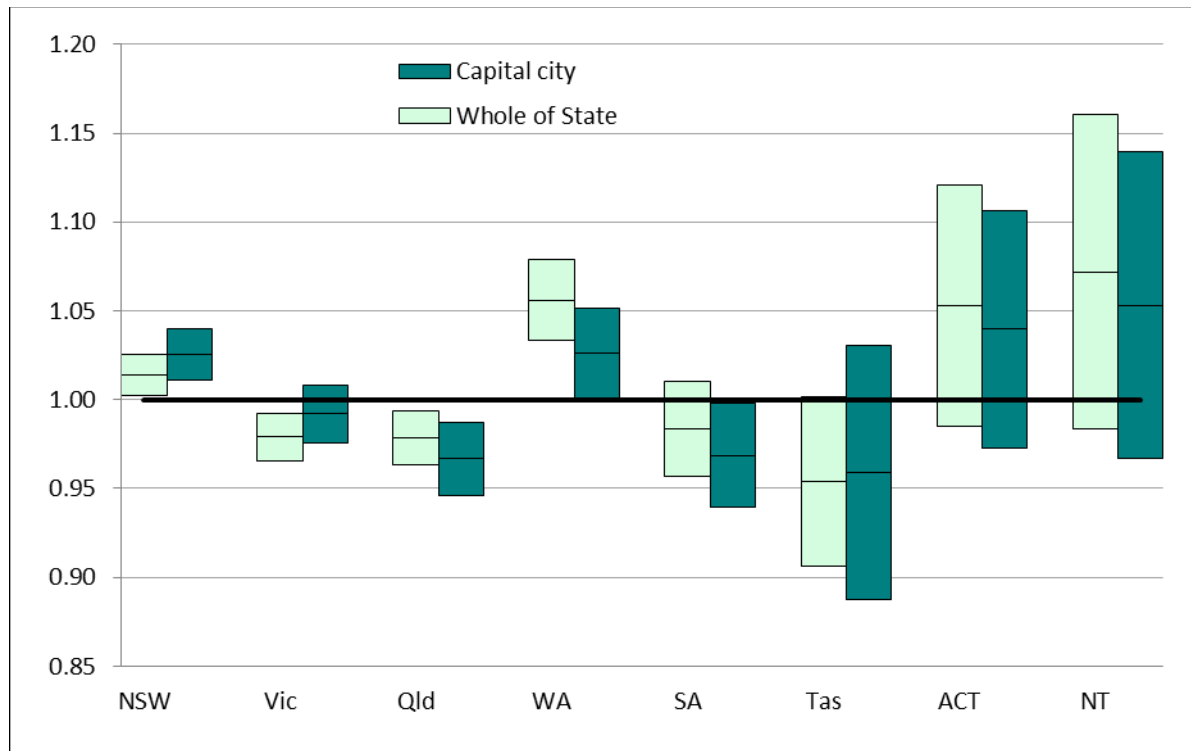
Figure 28-9 Interaction between regional costs gradient and State specific wage loading

Source: Commission calculation.

- 102 Western Australia made a case in its submission that median rents are higher in remote Western Australia than in remote areas of other States. We consider that the private sector, which usually does not provide employee housing, would have to offer wages that reflect the cost of living in remote Western Australia to attract staff. As such, the State specific regional wage loading will generally incorporate the higher cost of housing in Western Australia. To use it as a measure of the costs State governments would face seems appropriate.

Data quality

- 103 Staff consider an assessment based on a capital city based factor (combined with a State specific regional loading included in the regional cost assessment) best reflects the policy neutral pressure on wage costs. However, in developing an assessment, we must also consider the data available to model what States do.
- 104 Figure 28-10 shows that the sampling error associated with measuring capital city wages is slightly greater than that associated with measuring whole of State wages.
- 105 However, as a result of the SET being discontinued, staff intend to use the COE as its replacement for the wages assessment. The COE will have a substantially larger sample size than the SET and will be conducted annually. These two improvements should more than offset the increased volatility from limiting the wages regression to include only private sector employees in capital cities.

Figure 28-10 Relative private sector wages for comparable employees by region, 2009

Note: Capital city estimates are relative to the weighted average of capital cities. Whole of State estimates are relative to the national average. Data are not available to split the ACT and the Northern Territory, so capital city estimates for these States reflects the whole of State wage levels. The bars represent 95% confidence intervals.

Source: 2009 SET.

Impact of proposed changes to assessment

106 The proposed changes to the interstate wages and regional costs assessments are likely to have a relatively large redistributive impact, as can be seen in Figure 28-6. Western Australia will be assessed as needing to pay Perth wages in Perth, and regional Western Australian wages in regional areas. This is the equivalent of what it is assessed as needing to spend under the current approach. However, New South Wales and Victoria will be assessed as needing to spend Sydney and Melbourne wages not only in Sydney and Melbourne, but also in the regional areas of those States. This would lead to a significant increase in the assessed needs of those States. Table 28-1 shows that the proposed changes lead to a redistribution toward States with capital city wages considerably higher than their regional wages, and away from other States.

Table 28-1 GST impact of use of SET regression data

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
2010 Review approach									
Interstate wages (whole of State)	427	-601	-423	674	-157	-99	92	87	1 280
2015 Review approach									
Interstate wages (capital city)	800	-288	-699	372	-245	-91	75	75	1 322
State specific regional costs	-55	-42	-16	133	-12	-4	-3	-2	133
Total impact from SET regression	746	-330	-714	504	-257	-95	73	73	1 455
Difference	319	271	-291	-170	-100	4	-19	-15	175
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
2010 Review approach									
Interstate wages (whole of State)	58	-106	-92	274	-95	-192	243	373	56
2015 Review approach									
Interstate wages (capital city)	109	-51	-152	151	-147	-177	199	319	58
State specific regional costs	-7	-7	-3	54	-7	-7	-7	-9	6
Total impact from SET regression	102	-58	-155	205	-155	-184	192	311	64
Difference	44	48	-63	-69	-60	8	-51	-63	8

Source: Commission calculation.

Conclusions

107 We have found that, at least for some parts of the public sector, States set wages through the negotiation of State-wide agreements. Our analysis of SET results is consistent with this finding. This is not consistent with the current wages assessment. Therefore, staff consider a wages assessment based on capital city wages is more consistent with how States set wages.

State views are sought on:

- using capital city wages to assess interstate wages
- applying a State specific regional loading assessment to States with high regional wages based on the difference between the rest of State private sector wage level and the capital city private sector wage level.

ADJUSTMENTS TO THE WAGES ASSESSMENT

108 Victoria said the Commonwealth Superannuation Scheme (CSS) adjustments that are applied to the Northern Territory and the ACT are not necessary. However, if they are to be used they should not be applied to capital expenditure. They should be made only to specific categories where wages are affected by public sector superannuation.

- 109 Victoria also said the wage component of total expenses in capital intensive categories, particularly transport services, is less than the average of all expense categories. They suggested the wage component for transport should be less than the average of all categories.
- 110 Tasmania argued for an isolation discount to reflect the difference between its public and private sector labour force. It said their public sector workers are similar to most of Australia while their private sector workers have a lower level of education and experience. This suggests the model is understating the wage bill faced by the Tasmanian Government.

Analysis

- 111 The CSS adjustment applied to the ACT and the Northern Territory represents a material non-policy influence on the wage costs States face. As such, staff propose to continue to apply this adjustment. The Victorian contention that this adjustment should only apply where labour costs relate to State government employees is a valid one. As such, staff consider it appropriate not to include a CSS adjustment when applied to capital expenditure or depreciation.
- 112 The private sector results produced by the regression model are applied to the wages component of each expense category. Transport services are typically contracted out, generally to State owned public non-financial corporations. Because the wages of those contractors are incorporated into the contracts, the commission has captured that disability in the wages assessment. In the absence of data, the commission decided to use the average assessed proportion for transport services. As part of bringing transport and housing public non-financial corporations within scope of HFE, we have obtained data on the wages paid by these corporations. This should enable us to more accurately reflect the wage costs in transport services.
- 113 After the release of 2009 SET, the commission decided to discontinue the 25% discount applied to Tasmania's wage factor because Tasmania's private sector wages appeared to be a good proxy for measuring wage pressure faced by the Tasmanian Government. Staff retain the view that private sector wages remain a good proxy. The atypical structure of Tasmania's private sector is what the regression is designed to account for.

Staff propose to recommend the commission:

- not apply an isolation discount to Tasmania’s wage factor
- cease applying the CSS adjustments in the capital and depreciation categories.

Where are wages assessed?

- 114 Wages will be assessed in all expense categories, weighted to reflect the proportion of expenses which relate to labour costs. For the capital and depreciation categories we are considering whether capital specific cost indexes should be used. This is discussed in the investment and depreciation chapters. It is not yet clear what changes will be made in those categories, but the CSS adjustment will no longer be applied.

AGEING DATA AND THE APPROPRIATE DISCOUNT

- 115 Victoria believes private sector wages, as currently used by the commission, are not a reasonable proxy for a state’s public sector wages. Victoria also said the ageing SET data is unfit-for-purpose. In the absence of more appropriate data, Victoria said the wages assessment should be more heavily discounted or discontinued all together.
- 116 Tasmania said the current discount should be increased to 25% to reflect the unexplained variation in the SET regression.
- 117 The Northern Territory questioned the need for a discount at all stating that there is no evidence to suggest the SET model over estimates interstate wage differentials.

Analysis

- 118 In the 2015 Review, the 2009 SET data will be 6 years old. Updating with LPI serves to mitigate the impact of aged data, as does the possible lag between public and private wage levels. However, staff are concerned about the contemporaneity of data in the first year of the 2015 Review. Also, the evidence for a relationship between public and private sector wage levels is not as strong as it has been in the past.
- 119 In addition to this, there are a number of issues raised in this paper that have not been settled. In light of all of these issues, the commission has the option to adjust the discount applied to the wages assessment from the current 12.5%. However, staff consider that a decision regarding the factor discount should be deferred until all other outstanding issues have been settled.
- 120 The annual update guidelines allow us to change a discount in response to new data. We anticipate that the quality and contemporaneity of the data may change considerably during the review period. The nature of the relationship between public and private sector wages may also change. Therefore, the commission can decide the

appropriate discount in each year of the review period as more up to date data becomes available.

Staff propose to recommend the commission:

- not adjust the discount until all outstanding issues have been settled
- consider the appropriate discount to be applied to wages in each update, not merely at the start of the review.

CHAPTER 29 – INTERSTATE NON-WAGE COSTS

2010 REVIEW APPROACH

- 1 In the 2010 Review, the Interstate non-wage costs assessment comprised the interstate freight assessment and the interstate travel assessment. No comprehensive, comparable data were available to develop a reliable policy neutral measure of the interstate non-wage disability for the 2010 Review. However, the commission considered that a better equalisation outcome would be achieved by building an assessment covering these areas of cost difference than not.

ISSUES AND ANALYSIS

- 2 The major issues to be considered for this assessment are:
 - the impact of a change in the remoteness classification
 - the reliability of this assessment.

The impact of a change to the remoteness classification

- 3 The Regional costs assessment will be based on the Accessibility/Remoteness Index of Australia (ARIA) instead of the State-based Accessibility/Remoteness Index of Australia (SARIA). Because neither Tasmania nor the Northern Territory have cities over 250 000 people, their remoteness will now reflect their distance from Melbourne and Adelaide respectively. This means that the isolation of the Northern Territory and Tasmania from the large centres of manufacturing and importation will be assessed within the regional costs assessment. As such, staff consider the change from SARIA to ARIA conceptually captures the same disability as was previously captured by the freight assessment.
- 4 In its submission to the 2015 Review, Tasmania supported the assessment of interstate freight and travel costs but recognised that the re-categorisation of Hobart and Darwin to more remote towns (as would occur under ARIA) may have implications for this assessment.

Staff propose to recommend the commission:

- no longer assess freight.

The reliability of the assessment

- 5 Western Australia suggested that the interstate office accommodation assessment should be reinstated. Western Australia considers a reliable and material assessment could be made.
- 6 The submissions of New South Wales, Victoria and Queensland expressed concerns about the interstate non-wage factor being unreliable because of the quality of the underlying data.
- 7 In the 2010 Review, the Interstate non-wage costs assessment was comprised of a travel and freight assessment. In the 2004 Review, a range of interstate costs were assessed including:
 - travel
 - freight
 - office accommodation
 - electricity costs
 - medical travel related subsidies
 - labour related isolation costs in the Northern Territory.
- 8 While we have not reconsidered these assessments there is probably a conceptual case for assessing all of them and possibly other interstate non-wage costs as well.
- 9 Reliable data may be available for some of these disabilities, including accommodation. The data underlying the range of interstate costs assessed in 2009 had varying levels of reliability. In 2009, the total redistribution from interstate non-wage costs assessments moved in the same direction as the accommodation assessment for only 3 States. Staff, therefore, 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.
- 10 While staff acknowledge that there are differences in non-wage costs between States for a range of different disabilities, we have not identified a way of assessing the net outcome of all these disabilities.

Staff propose to recommend the commission:

- cease the Interstate non-wage assessments on the grounds that the largest component is now captured with the Regional costs assessment and we do not have confidence that the residual costs are better proxied by those elements for which data exists than by an equal per capita assessment.

CHAPTER 30 – REGIONAL COSTS

BACKGROUND

- 1 The regional costs disability recognises that differences in the costs of delivering services can vary between regions for a variety of reasons, including:
 - higher wages are needed to entice people to work in less attractive locations within a State
 - additional benefits may be provided (such as subsidised housing)
 - it may cost more to move goods to some locations or more expensive goods may be required.
- 2 This variation in the cost of delivering services is largely due to cost increases as remoteness increases. The costs identified above change with remoteness because:
 - remote locations are generally less desirable than urban areas hence higher wages or allowances are required
 - employee housing is more likely to be provided in remote areas where there are fewer accommodation alternatives
 - extra costs are incurred on goods and staff travel over longer distances within a State
 - more expensive or additional inputs are often required (for example, the number of four wheel drive vehicles and additional fuel required for remote policing).

2010 REVIEW APPROACH

- 3 In the 2010 Review, the commission sought data from the States on their total costs and number of employees by region for schools and police services. The data were used to calculate national average costs per full-time equivalent employee for each region of the State-based Accessibility/Remoteness Index of Australia (SARIA) region. Each region's total average cost was compared with the total average cost for highly accessible areas to derive a relative weight. These weights were applied to the populations in each region in each State to calculate weighted populations from which disability factors were derived.
- 4 The general gradient was the simple average of the schools and police gradient. This general gradient was applied to:
 - Community and other health services
 - Welfare and housing

- some elements of Other expenses
- rural roads expenses within the Roads assessment.

ISSUES AND ANALYSIS

- 5 The major issues to be considered for this assessment are:
- changing the remoteness classification
 - new data availability
 - whether remote communities are comparable
 - implications of a 'spend gradient' for the Regional costs assessment
 - the extrapolation of the schools cost gradient to other categories
 - the discount to be applied.

Changing remoteness classification

- 6 Staff are proposing to use the Accessibility/Remoteness Index of Australia (ARIA) rather than SARIA for the 2015 Review. The most significant impact of this change is that Hobart and Darwin will be classified as inner regional and outer regional areas respectively. Other aspects of ARIA that differ from SARIA are the permeability of State borders, truncation and the use of enumerated census counts.
- 7 This change will also have implications for the Interstate non-wage costs assessment. These implications are discussed in the Interstate non-wage costs chapter.
- 8 States were consulted about this change before State submissions were provided. No State raised further concerns in their submissions on priority areas and architecture.
- 9 Tasmania's submission to the 2015 Review stated that a more appropriate remoteness classification than SARIA needed to be used. The ACT's submission stated that remoteness, including the move to ARIA is a key factor that needs to be considered.

Staff propose to recommend the commission:

- use ARIA as its remoteness classification and staff have used ARIA in the calculation of the regional costs gradient.

New data availability

- 10 New data available from the Australian Curriculum, Assessment and Reporting Authority (ACARA) provides us with a firmer grounding for developing a model of regional cost weights for School education (than was available for the 2010 Review). Due to the level of detail available in the ACARA data we have been able to develop a

fully-integrated regression model for SDS, regional costs, Indigeneity and socio-demographic composition (SDC). This regression is discussed in more detail in the technical appendix to the Schools education chapter.

- 11 The model regressed funding per school to arrive at an additional cost per student for each ARIA region compared to major capital city areas. Using these regression results we developed a cost gradient which allows us to assess regional cost differences for schools in each State.
- 12 The conceptual case underlying this gradient (outlined in paragraph 1) is strong and the new data available allows us to calculate the relevant cost weights with greater precision than previously possible.
- 13 New South Wales expressed concerns about the calculation and size of intrastate cost differentials. It stated that it is important for the credibility and integrity of the HFE process that there is confidence around the methodology and estimates used in deriving this factor.
- 14 **Conclusion.** Given the high quality of the data used to calculate a proposed Schools regional costs gradient for the 2015 Review, staff are confident of the reliability of this assessment. The 2010 and 2015 Review cost gradients are shown in Figure 30-1.

Staff propose to recommend the commission:

- utilise the schools regional costs gradient calculated from a regression of ACARA data to assess regional costs for schools.

Comparability of remote communities

- 15 Western Australia has expressed concerns regarding the assumption of equal additional costs in Australian regions of equal remoteness. It also said that the regional costs assessment should take into account State-by-State differences in housing accommodation costs in areas of similar remoteness.
- 16 The 2010 Review method for assessing interstate wage differences involved taking a whole of State average private sector wage. Staff propose that for the 2015 Review the interstate wages assessment be based only on capital city wage levels. This issue is discussed in more detail in the Interstate wages chapter. Stemming from this decision staff propose to assess a State specific regional loading for States with high regional wages based on the difference between the rest of State private sector wage level and the capital city private sector wage level.
- 17 For States with high regional private sector wages relative to their capital city private sector wages, we would assess them as needing to pay national average regional loadings plus an additional allowance to compete with their high regional private sector wages. This additional allowance could be in the form of bonuses or

accommodation, but would reflect the total additional cost required to attract private, and public, sector workers to the affected regions. Staff consider that the concerns raised by Western Australia will therefore be addressed by the State specific regional loading.

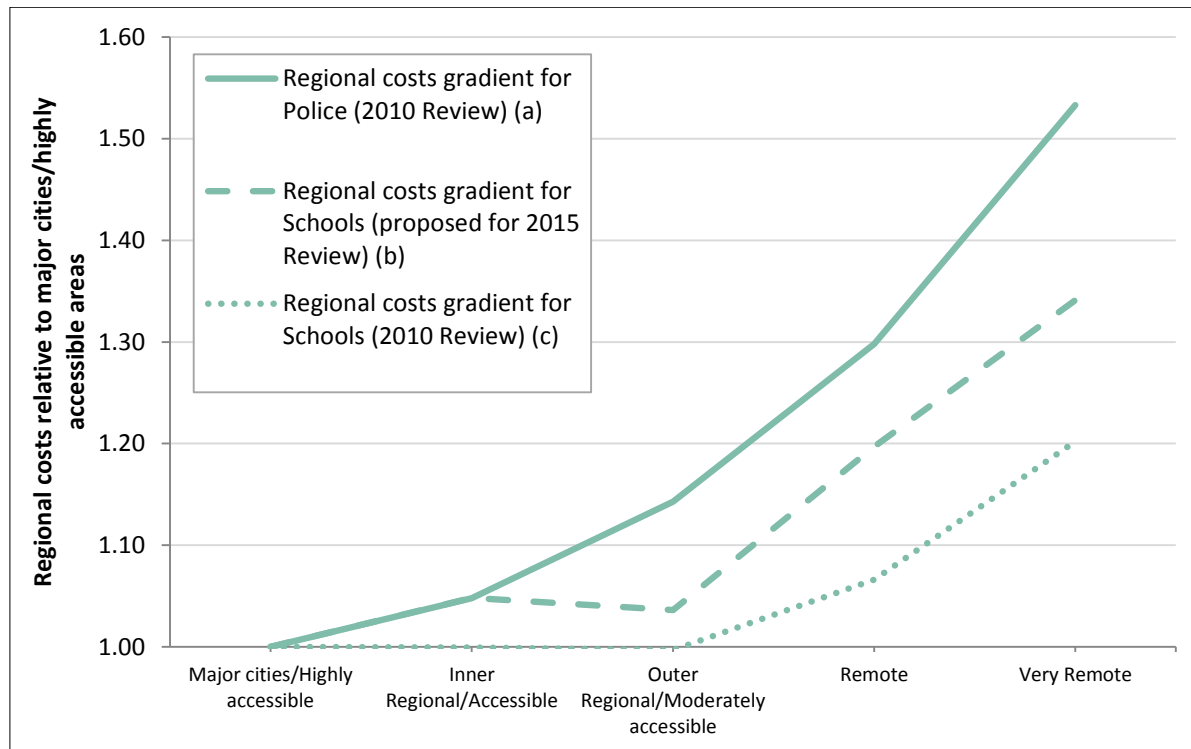
- 18 The Interstate wages assessment describes this allowance in more detail.

Staff propose to recommend the commission:

- apply a State specific loading to those States with high regional wages based on the difference between the rest of State private sector wage level and the capital city private sector wage level.

Extrapolating to other services

- 19 Staff do not consider that there has been any significant improvement or standardisation of State police staffing data since gathering data for the 2010 Review. While weights could be recalculated, staff do not consider that what would probably be a minor revision to costs warrants the significant burden placed on the States by this request in the 2010 Review. As such staff do not propose to recalculate the police cost gradient and the 2010 weights should continue to be applied to police cost weighted clients.
- 20 Staff consider that there is a strong conceptual case for regional costs in areas other than schools and police. In the absence of data directly measuring costs in these areas extrapolation is appropriate. The schools cost gradient is based on higher quality data and produces a more conservative gradient than the police data, as is shown in Figure 30-1. As such we consider extrapolating only from schools to other categories is warranted.
- 21 Victoria has suggested that the extrapolation of the general regional costs gradient (an average of the school and police gradient) to other categories in the 2010 Review was inappropriate as regional cost weights should not be applied where they cannot be directly measured. They also expressed concern regarding the police cost weights being extrapolated to the whole category of Justice services.
- 22 In response to these concerns, staff propose to extrapolate only from schools which utilises high quality data in its calculation. Furthermore, staff propose to only apply the regional cost gradient to police expenses within Justice services.

Figure 30-1 Schools and police gradients

Source: Commission calculation

- (a) The police gradient shown is SARIA based. The gradient will change when ARIA is applied to the underlying data.
- (b) The schools gradient proposed for 2015 is ARIA based.
- (c) The schools gradient used in the 2010 Review is SARIA based.

Staff propose to recommend the commission:

- extrapolate the schools regional costs gradient to those categories to which regional costs were applied in the 2010 Review with the exception of Justice services
- apply the 2010 Review police regional costs gradient only to police (within Justice services)
- maintain the regional costs gradients until the next review.

Size of discount

- 23 In the 2010 Review, a low discount of 12.5% was also applied to the regional costs factor for all categories to which it was applied. As the schools data to be used in the 2015 Review is more reliable and robust than in the 2010 Review, staff propose that the discount be removed from the Schools education regional costs factor.
- 24 Extrapolation from the schools regional costs gradient to other categories opens the assessment to a degree of uncertainty. To account for this uncertainty staff propose

that the discount continue to be applied to the regional costs factors for all categories to which the schools gradient is extrapolated.

- 25 Staff also propose to continue applying the low discount to the police regional costs factor. This reflects the more unreliable nature of the available police data in comparison to the available schools data.
- 26 Tasmania's submission to the 2015 Review stated that some government employee costs in remote locations may not be fully recognised due to the discount applied to the regionals costs assessment and that this should be reviewed.
- 27 Staff are not confident that removing the discount from categories other than Schools education would result in outcomes closer to achieving HFE.

Staff propose to recommend the commission:

- not apply any discount to the Schools education regional costs factor
- apply a low discount of 12.5% to the regional costs factor for all other categories to which it is applied.

REGIONAL COST DISABILITY

- 28 Table 30-1 shows the categories in which the regional costs disability is assessed.

Table 30-1 Regional costs client base and gradient used for category assessments

Category or component	Client base	Gradient
School education	Government students	Schools
Community health services	Population	Schools
Welfare	Population	Schools
Housing	Population	Schools
Services to communities - water subsidies	Assessed population	Schools
Services to communities - electricity subsidies	Assessed population	Schools
Services to communities - community development	Assessed population	Schools
Justice services	Police cost weighted clients	Police
Roads - rural roads	Assessed rural road lengths	Schools
Other expenses - half of service expenses	Population	Schools

CHAPTER 31 – SERVICE DELIVERY SCALE

2010 REVIEW APPROACH

- 1 In the 2010 Review, the commission considered that in small isolated communities services were provided but inputs per user could not be fully utilised and were not used as productively as in other areas. These areas were defined and measured using an analysis of school and policing staff. The commission concluded that service delivery scale (SDS) affected costs in areas which were 50 km from centres of 5 000 people.
- 2 This increase in costs in SDS areas was measured using school and police data and an extrapolation was made from these services to the Community and other health services and Welfare and housing categories.

ISSUES AND ANALYSIS

- 3 The major issues to be considered for this assessment are:
 - changing the definition of SDS areas
 - the categories to which the SDS disability is to be applied
 - calculation of cost weights for schools.

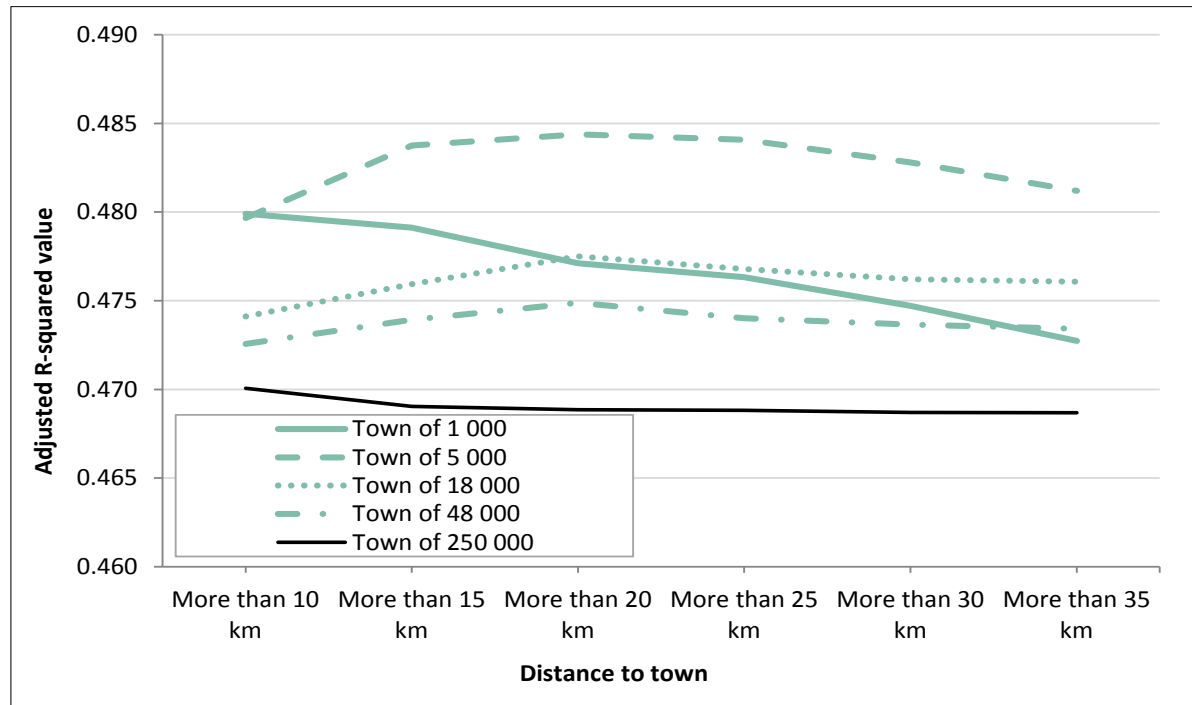
Changes to the definition of service delivery scale areas

- 4 Since the 2010 Review, the Australian Curriculum, Assessment and Reporting Authority (ACARA) has launched their My School website. Data available from ACARA are now more detailed and comparable than data previously available.
- 5 Using ACARA data we were able to perform regression analysis to determine the most accurate definition of service delivery scale areas. While controlling for a range of variables,¹¹⁰ including remoteness and socio-demographic composition, we hypothesised that funding variations due to SDS were best explained by a variable defined by distance from towns of a certain size.
- 6 We found the best explanation of SDS effects to be schools 20 km or more from a town of 5 000 people. A regression that used this variable had a higher R^2 value than all the regressions using other variable as a proxy for SDS areas. Figure 31-1 shows that the R^2 value peaks at the value of 20 km or more from a town of 5 000 people;

¹¹⁰ The independent variables included for all regressions were State, Indigenous proportion, LBOTE proportion, school type, SARIA region and ICSEA quintile. The regression was weighted by FTE enrolments.

that is, this variable best explains the variation in funding per student, after controlling for other variables.

Figure 31-1 Regressions on funding per student – Adjusted R²



Source: Commission calculation using ACARA data.

- 7 South Australia stated in its submission to the 2015 Review that the SDS disability should continue to be included in assessments. The ACT expected no changes to the assessment. Tasmania's submission indicated that it supported the 2010 Review approach to location including that to SDS.

Staff propose to recommend the commission:

- measure the schools education SDS disability on the basis of government students living in areas more than 20km from a centre of 5 000 people or more.

Categories to which the SDS disability is to be applied

- 8 In the 2010 Review, SDS was measured for police and schools, and extrapolated to the Community and other health and Welfare and housing categories. We have reconsidered the evidence for this extrapolation.
- 9 A greater degree of health specialisation occurs in urban areas than isolated areas. For example, in an isolated area it may be most convenient to see a GP for knee pain whereas in urban areas the patient may see a physiotherapist. This scenario highlights the greater substitutability of health services. This substitutability provides

flexibility to health systems, allowing them to avoid SDS issues by providing services in different ways. Data provided by Queensland to the 2010 Review shows that within its Department of Health the total remote staffing level per population is roughly equal to that in accessible areas. This does not support the existence of SDS in Community and other health services. While SDS was assessed in Community and other health services in the 2010 Review, staff do not recommend continuing this unless States can provide stronger evidence supporting the need for such an assessment.

- 10 The Welfare and housing category is to be split in the 2015 Review, with significant changes to disability services and aged care. We have reconsidered what aspects of these State services are affected by service delivery scale. Staff consider that SDS is applicable only to family and child services within the new category of Welfare and is not applicable to the category of Housing.
- 11 We consider the measurement of service delivery scale for schools to be reliable and as such, we do not consider that a discount to the SDS disability in Schools education is required. Unfortunately, such comprehensive data do not exist for other categories. We propose that the schools definition of SDS be extrapolated to these other categories, but a discount continue to be applied to reflect a level of uncertainty regarding the underlying data.
- 12 Western Australia suggested that the SDS factor could be applied more broadly and that the discount could be removed. Victoria expressed concerns with extrapolating regional costs to categories where it is not directly measured.
- 13 Staff have considered the available data and have not found sufficient evidence to apply SDS beyond Schools education, police (within Justice services) and family and child services (within Welfare). Staff consider the discount to be appropriate.

Staff propose to recommend the commission:

- apply the SDS disability to Schools education, family and child services (within Welfare) and police (within Justice services)
- apply a 12.5% discount to the family and child services and police assessments.

Calculation of cost weights for schools

- 14 Due to the level of detail available in the ACARA data, we have also been able to develop a fully integrated regression model for SDS, regional costs, Indigeneity and socio-demographic composition (SDC). The SDS variable of this model refers to all schools in an area more than 20 km from a town of 5 000 people. Using this integrated model, staff calculated that the SDS cost weight is 1.10. While this cost weight is considerably lower than the 1.4 used for schools in the 2010 assessment, the population that would be affected by the disability has nearly doubled. This

occurs because there are nearly as many people living between 20km to 50km from a town of 5 000 as there are living more than 50km from such a town.

- 15 Staff propose applying the cost weights calculated in the integrated regression directly to Schools education and family and child services (within Welfare). As the regional cost weights for police remain unchanged in the Regional costs assessment, staff propose to apply the recalculated definition of SDS areas to police and to use the data gathered from States in the 2010 Review to estimate the cost weight.

Staff propose to recommend the commission:

- apply the SDS cost weight as measured using schools data directly to School education and family and child services (within Welfare).
- apply the definition of SDS areas as calculated using schools data to police (within Justice services).

- 16 Table 31-1 shows the categories in which the service delivery scale disability is assessed.

Table 31-1 Service delivery scale client base and weight applied to category assessments

Category or component	Client base	SDS weight
School education	Cost weighted government students	1.10
Welfare — family and child services	Population	1.10
Justice services — police	Police cost weighted clients	-

CHAPTER 32 – NATIONAL CAPITAL

2010 REVIEW APPROACH

- 1 National capital allowances recognise the unavoidable extra costs incurred by the ACT because of Canberra's status as the national capital or because of legacies inherited from the Commonwealth at the time of self-government. The assessment accounts for the following:
 - Higher wages for policing services. The ACT has no practical alternative but to use the AFP as the provider of its policing services. However, the ACT has no power to influence AFP employee salaries, which are above average, leading to higher costs. An assessment is made by deriving a nominal level of ACT police staffing and multiplying by the difference between the average AFP and average State police staff salaries.
 - Higher roads maintenance costs. The ACT inherited arterial roads from the Commonwealth at the time of self-government, some of which are wider than those in other States. The allowance will remain in the Roads category until the 2018 Update¹¹¹, after which time the relevant roads will have reached the end of their useful life.
 - Higher costs due to planning and development restrictions placed on the ACT Government through the National Capital Plan.

2015 REVIEW PROPOSED APPROACH

- 2 Due to the short timeframe for the 2015 Review, and considering that no State addressed national capital allowances in their submissions (except the ACT who supported the existing assessments), staff do not intend to change the approach to this assessment.
- 3 National capital allowances will continue to be assessed in Justice services, Roads and Other expenses. However, staff confirm the roads allowance we will no longer be assessed after the 2018 Update.

¹¹¹ The commission first made this assessment in all years of its 2004 Review. It said the assessment would remain for 15 years. This means the last assessment will be in all years of the 2018 Update.

CHAPTER 33 – CROSS-BORDER

2010 REVIEW APPROACH

- 1 Cross-border disabilities assess the costs incurred by a State when residents of another State use their services, which increases the costs of providing these. However, the ACT is the only State to incur a material level of net cross-border costs due to Canberra acting as a major regional centre of south-eastern New South Wales, and therefore is the only State for which we make an assessment.
- 2 The cross-border disability is only applied to some ACT services. We consider that when reimbursement arrangements exist (such as for public hospitals), there is no need to assess a cross-border allowance. For other services that have reliable data available to assess net cross-border costs, these data are used. However, reliable data do not exist for all the relevant services, and in this case the general method is used. The general method involves increasing the ACT's population and decreasing New South Wales' population (for the purpose of the assessment) by 30% of the population of surrounding New South Wales Statistical Local Areas. This is the estimated percentage of New South Wales residents that use the ACT's services.
- 3 A cross-border disability is assessed in:
 - Schools education, all service delivery expenses – uses actual number of enrolments of New South Wales residents in ACT school education services.
 - Post-secondary education, all service delivery expenses – uses National Centre for Vocational Education Research data on the net number of hours the ACT training system supplies to New South Wales residents.
 - Community and other health services, out-of-hospital health service expenses only – uses the general method.
 - Welfare and housing, welfare expenses only – uses the general method.
 - Other expenses, culture and recreation expenses only – uses the general method.

2015 REVIEW PROPOSED APPROACH

- 4 Due to the short timeframe for the 2015 Review, and considering that no State addressed cross-border costs in their submissions (except the ACT who supported the existing assessments), staff do not intend to change the approach to this assessment. The data used in these assessments will continue to be updated annually, including the actual use data that are used to derive cross-border factors and the New South Wales population surrounding the ACT.

5 Table 31-1 shows the categories in which the cross-border disability is assessed.

Table 33-1 Cross-border disability applied to category assessments

Category	Method
School education	Actual number of enrolments
Post-secondary education	Net number of VET annual contact hours
Community health	General method
Welfare	General method
Other expenses - culture and recreation expenses	General method

CHAPTER 34 – NATIVE TITLE AND LAND RIGHTS

2010 REVIEW APPROACH

- 1 The Native title and land rights assessments recognise the additional costs incurred by the States due to the operation of the following Commonwealth legislation:
 - *Native Title Act 1993*. This act recognises Indigenous people's traditional rights on their land as common law. States incur costs for administering the legislation, compensating holders of native titles in the settlement of claims, and any ongoing costs associated with joint management of land.
 - *Aboriginal Land Rights (Northern Territory) Act 1976*. This act only applies in the Northern Territory and allows for areas of Crown Land to be transferred to Indigenous Australians as a result of claims accepted by the Aboriginal Land Commissioner. The Northern Territory incurs costs in negotiating claims and preparing submissions to the Commissioner, and in challenging claims through the Federal and High Courts.
- 2 Native title and land rights expenses are assessed on an actual per capita basis in a number of categories. This is because we consider that State spending is due to Commonwealth legislation and policies, and States have adopted uniform policies in response to their individual circumstances.
- 3 For more detailed information on this category, refer to the 2010 Review report.

2015 REVIEW PROPOSED APPROACH

- 4 Due to the short timeframe for the 2015 Review, and considering no State addressed native title and land rights expenses in their submissions, staff do not intend to change the approach to this assessment.

Presentation of Native title and land rights assessment

- 5 In the 2010 Review, native title and land rights expenses were identified in each relevant category and assessed within that category. To simplify the presentation of this assessment, staff are proposing to assess all native title and land rights expenses in a single component of the Other expenses category. The expenses for the former categories would be reduced by the amount of native title and land rights expenses removed. This change is presentational and would have no impact on GST distributions.

Staff propose to recommend the commission:

- for presentational purposes, include all native title and land rights expenses in the Other expenses category rather than assessing them in a number of categories.

CHAPTER 35 – CULTURAL AND LINGUISTIC DIVERSITY (CALD)

2010 REVIEW APPROACH

- 1 In the 2010 Review, the commission said it ‘accepted the conceptual case for inclusion of a disability reflecting the additional expenses incurred by States in providing services to migrants with low English fluency. [It] made a combined assessment covering the disability for Schools education, Admitted patients and Community and other health services in [the other expenses] category. A more specific assessment was made in the Post-secondary education category where data were available to do so.’
- 2 ‘While there was clear evidence of a conceptual case for CALD disabilities, we had considerable difficulty obtaining reliable data to measure them. Data relating to migrants with low English fluency are of inconsistent quality — there are some good data on unit costs, some not so good data on unit costs, and limited and conflicting data on intensity of service use.’

ISSUES AND ANALYSIS

- 3 The major issues to be considered for this assessment are:
 - cost of service provision
 - data issues associated with measuring costs of CALD groups
 - use of services.

Cost of service provision

- 4 New South Wales claims that the cost of delivering services to people with poor English skills is significant. It reiterated the research it had provided in the 2010 Review, in particular that the costs of providing services to people who speak a language other than English are considerably higher than those for services to people who speak English only. New South Wales considers that CALD costs are significant in admitted patient services, community and other health services, welfare, housing and justice services.

Data issues

- 5 The commission has, for several reviews, attempted to measure the impact that migrants and people with poor English skills have on State budgets. States have

recommended, and we have attempted, various ways of defining this group. Most of these attempted definitions have not yielded reliable material assessments.

- 6 **Humanitarian refugees.** This is a very small population, with little information on either service use, or State of residence.
- 7 **People born in other than mainly English speaking countries.**¹¹² People born in mainly English speaking countries is a very heterogeneous population, with large numbers of people with proficient English, and cost patterns very like the Australian born population.
- 8 **People with low proficiency in English.** It is very difficult to relate the concept of self-assessment of proficiency in English in the census, with the definition used in service use, where service providers assess a person's proficiency.
- 9 **People who need assistance from translators.** There is no data on the number of these people in the population, only on their use of services.
- 10 In the lead up to the 2015 Review, we worked with States through the Data Working Party and decided that country of birth was a more objective measure as it is relatively free from the issues of identification that mar language proficiency variables. Developing a classification of which countries experience high cost could be undertaken where service use and cost data are available. This is discussed in the next section.

USE OF SERVICES

Hospital services

- 11 To support its claim that CALD is a material disability, Victoria has provided data on all admitted patient separations in Victoria, identifying their SLA of usual residence, age and country of birth as well as their cost. New South Wales has not yet provided similar data.
- 12 We have analysed the Victorian data to determine the nature and extent of CALD influences in admitted patient services.
- 13 We have found that use and cost vary considerably for people born in different countries. For example, people born in Greece are 34% more expensive than the average non-Indigenous Victorian. However, the costs associated with other birthplace groups are considerably lower than average, in particular those born in India (26% lower) and China (38% lower).

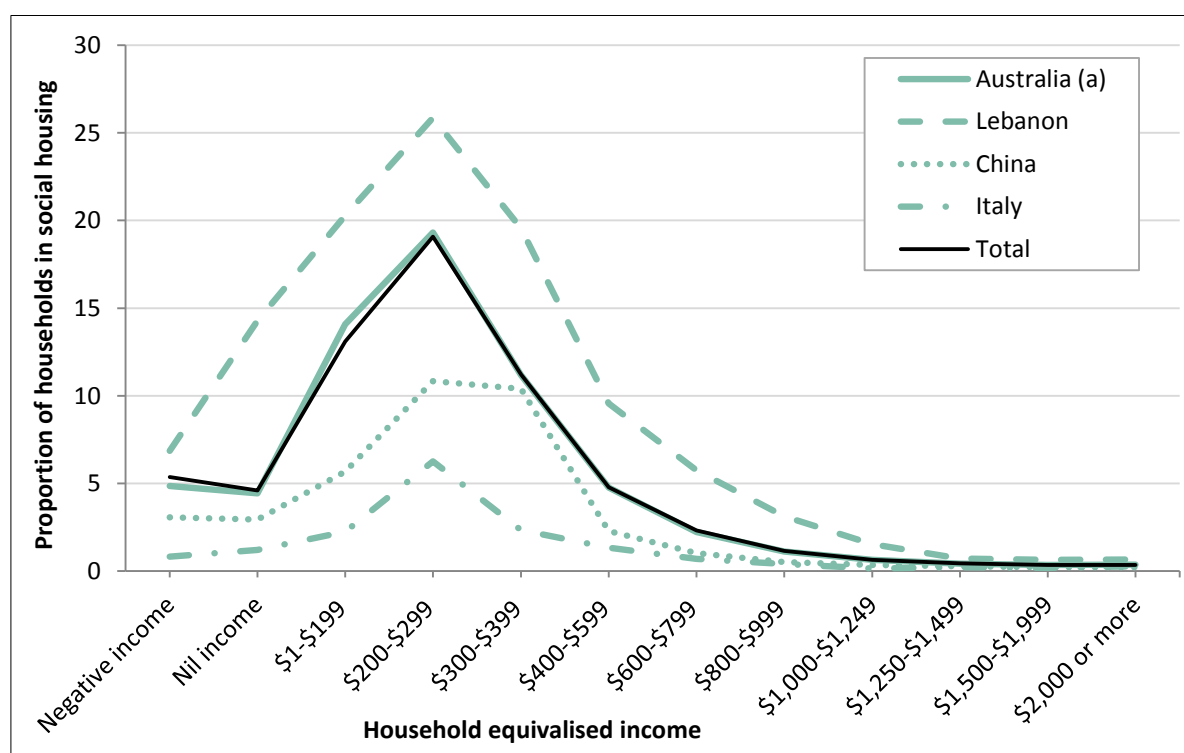
¹¹² UK, New Zealand, USA, Canada, South Africa or Australia.

- 14 The net effect of this is that disaggregating by country of birth has a virtually negligible effect on New South Wales (+\$3 per capita) and Victoria (-\$4 per capita). However, the impact in other States is slightly larger. 11.4% of Western Australia's non-Indigenous population were born in the United Kingdom (UK), compared with 5.6% nationally. This over-representation, along with the UK born population having 8% below average costs (in Victoria) means that disaggregating by country of birth would redistribute \$32 per capita away from Western Australia. Conversely, Tasmania has a higher than average share of the Australian born population, who are 1.6% more expensive than average, leading to a material redistribution of \$50 per capita to Tasmania.
- 15 Our analysis has found that differences in use rates are much more significant than differences in cost. For example, given their age and socio-economic profile, compared with the average non-Indigenous Victorian:
 - Greek born people go to hospital 47% more frequently
 - they go for 11% less complex procedures
 - those procedures cost 2% more than for the average non-Indigenous Victorian
 - with the net effect that Greek born are 34% more costly per capita.
- 16 Many birthplace groups have low use of hospital services because of what AIHW call the 'healthy migrant effect'. Because of the selection processes associated with obtaining an Australian visa, and the self-selection processes associated with deciding to move countries, migrants may be less likely to have chronic illnesses.
- 17 In addition to this, cultural differences, especially in relation to diet, are likely to result in very different health outcomes between different groups.
- 18 While there is likely to be an impact on service cost by people with low proficiency in English, this effect appears to be relatively small compared with the differences in use that different birthplace groups exhibit.
- 19 **Caveats on this data.** Our analysis is not consistent with the results of the Victorian study provided during the 2010 Review. Victoria found that in 2005-06, in 3 selected hospitals, separations for people who needed a translator cost 43% more than those for people who did not need a translator. We attempted to replicate this study with the data Victoria had provided. We found that for the same 3 hospitals, separations of people who nominated a language other than English as their 'preferred language' were actually 20% less expensive than separations of people who preferred English.
- 20 We would like to confirm whether there are assumptions or other issues in our approach that are not appropriate. We have asked Victoria to review our analysis.
- 21 The data Victoria provided us are highly confidential. As such we are unable to provide it to other States. If other States are interested in reviewing our analysis, please contact Victoria.

Public housing

- 22 A second category where data are readily available to assess the impact of CALD is in public housing. We have used census data to examine which birthplace groups are most commonly found in public housing. We found that people born in Lebanon were 67% more likely than other people on similar incomes to live in public housing, while those born in China, were 40% less likely, and those born in Italy only a quarter as likely.

Figure 35-1 Use rates for social housing, selected countries of birth



(a) Non-Indigenous Australian born.

Source: Census of Population and Housing.

- 23 State governments do not use country of birth as a criterion in assessing an application for public housing. However individuals do consider their values, the attitudes to public housing in their country of origin, and the extent of their social support network in deciding whether to apply for public housing.
- 24 New South Wales has provided evidence that 'subsidies to non-English speaking tenants were \$134 compared with \$118 for other tenants (about 14% extra)'. It is not clear whether CALD clients increase the cost for comparable properties, or whether CALD clients tend to live in the more expensive properties.
- 25 Census data show that public housing tenants who speak a language other than English are more than twice as likely to live in a house with 6 or more residents than

those who speak English only. This pattern of housing is likely to lead to CALD clients having higher costs per house, but quite likely significantly lower costs per capita, as it is likely that providing one large house for 8 people is cheaper than providing 2 smaller houses for 4 people each.

- 26 The difference in use patterns does not appear to be material for any State.
- 27 Despite the differences in use shown in Figure 35-1, assessing use levels by country of birth does not produce a materially different result, redistributing less than \$2 per capita for any State.

Community Services

- 28 New South Wales provided evidence that a Department of Community Services case worker's costs are 50% higher for non-English speaking clients. However, use rates appear to be considerably lower. Despite poor quality data on language spoken at home, the department estimates that 15% of children in care are from a family where a language other than English is spoken at home.¹¹³ This is significantly less than the 27.5% of the New South Wales population that speak a language other than English at home.

CONCLUSION

- 29 It is worth reiterating that our Victorian health analysis has not been reviewed by Victoria, and as such is preliminary.
- 30 We consider that there is a conceptual case that in a range of functions, people with poor English skills increase the costs to States of providing services.
- 31 However, we consider that birthplace groups have significantly greater differences in use. People born in Australia have higher use than the overseas born in both hospitals and public housing. In New South Wales, English speaking families have greater use of child protection than non-English speaking families.
- 32 The largest single birthplace group, those born in the United Kingdom, have 9% higher than average use of public housing, and 16% lower than average use of hospitals.
- 33 There is evidence that while some birthplace groups have higher than average use and/or cost for at least some services, other birthplace groups have lower use and/or costs. However, there is no strong evidence about which State's mix of birthplace

¹¹³ Children and young people from non-English speaking backgrounds in out-of-home care in NSW, Department of Community services, 2008.

http://www.community.nsw.gov.au/docswr/assets/main/documents/research_cald_oohc_review.pdf

groups would lead to a higher than average cost profile, and which would lead to a lower than average cost profile.

- 34 At this stage, we are not recommending any change to the CALD assessment in the other expenses category, or to the assessment of English proficiency in the post-secondary education assessment. However, if Victoria does not identify any serious concerns with our analysis, and given the proposed increases in our materiality thresholds, we are likely to recommend ceasing both these assessments.

State views are sought on the proposal:

- to review the work we have done with Victoria
- subject to the results of that review and the new materiality thresholds, to cease assessing cultural and linguistic diversity.

CHAPTER 36 – POPULATION

ESTIMATED RESIDENT POPULATION

- 1 For all its assessments, and its overall relativities, the commission requires population level estimates. For its capital assessments it requires population growth estimates, and for many assessments it requires population data on a range of population groups disaggregated by age, gender, Indigenous status, socio-economic status (SES) and location.
- 2 **Population level estimates.** For assessments that require estimates of the size of the total population, staff consider we should continue using estimates at 31 December. This is the middle of the financial year. This is the series used for calculating:
 - EPC distributions
 - factors
 - per capita relativities.
- 3 **Population growth estimates.** For capital assessments, conceptually we want population growth across the financial year, which is growth from 30 June to 30 June. In the 2010 Review approach, we used the 31 December populations for both levels and growth. Calendar year growth was used as a proxy of financial year growth. In the 2015 Review, we propose to recommend using financial year growth.
- 4 **Disaggregated data.** For disaggregated estimated resident population (ERP), conceptually we want 31 December, as the mid-point of the financial year. However, this is not available, so we use 30 June data at the end of the period. This is the approach taken in the 2010 Review. The ABS provides these data annually disaggregated by age, gender, and geography.
- 5 However, apart from the Census year, the ABS does not provide these data disaggregated by Indigenous status. As a result Indigenous disaggregations are imputed by the commission for subsequent years. ABS Indigenous population projections are used to estimate the total number of Indigenous persons at 30 June each year by age and State. These are then distributed across the other disaggregated variables (geography and gender) in proportion to total population for these groups. The estimated number of Indigenous people in each disaggregated group are subtracted from the group's total to give the number of non-Indigenous people in the group. Staff propose that this approach be confirmed.
- 6 **Service populations.** In the 2010 Review, we used ERP data as the basis of our estimates of potential service use. This was despite the commission acknowledging that tourists, itinerant and fly-in-fly-out worker populations and mobile Indigenous

populations probably affected service delivery requirements and did so differently for different States and services. We were not able to identify or measure the effects.

- 7 While no State directly raised concerns with the usual resident concept, staff have considered its appropriateness in measuring the needs of FIFO workers, and other itinerant populations.
- 8 The ABS says that no reliable method of estimating service populations has been developed nationally or internationally because service populations are not discrete or mutually exclusive. States have not been able to provide data on how different service populations affect State service provision requirements and State budgets.
- 9 We could use population at census time on a place of enumeration basis to give an indication of the size of an adjustment that might be made to resident population to account for population mobility. However:
 - The enumerated population is highly seasonal. While northern parts of the country may have an influx of tourists in August, this is not necessarily representative of the number of people in the area in February.
 - Geography for most administrative data is based on place of usual residence.
 - Services that are not provided on the basis of usual resident populations, such as police services, are not necessarily provided on the basis of where people are enumerated either.
- 10 Where people usually reside is not always the ideal measure of where services are provided, but for most services, it is a better measure than anything else available.
- 11 As discussed in the mining expenditure chapter, we do not consider that a measure of the population distribution that reflected service populations would produce a materially different result, even if suitable data were available.
- 12 The Standing Committee on Regional Australia undertook an inquiry into the use of ‘fly-in, fly-out’ (FIFO) workforce practices in regional Australia, and reported in February 2013. It concluded that:

There is very little firm nation-wide data available on the use of FIFO workforce arrangements in the resource industry. This lack of data makes it difficult to properly establish the extent of the use of FIFO arrangements in the resource industry and future workforce projections as well as the full impact on communities in terms of consumption of town services (for example, infrastructure such as roads, sewerage and water consumption).
- 13 There remains no reliable national data on the population distribution other than the ABS’s ERP. As such, we propose recommending the continued use of ERP as our measure of all populations.
- 14 Where we have a choice between enumerated and resident population, we consider that resident population is generally better.

- 15 Western Australia has raised a range of associated issues concerning their FIFO population. These are discussed in detail in the mining expenditure chapter.

Staff propose to recommend that the commission:

- use ERP for its population estimates
- use 31 December estimates for total population level estimates
- use 30 June estimates for population growth, or where disaggregated population data are required.

Age groups

- 16 In the 2010 Review, the way in which certain classifications were disaggregated varied from category to category. Figure 36-1 shows how age was disaggregated in the 2010 Review. While it may be material to separate the 65-74 year olds from the 75-84 year olds and those 85 and over in the health assessments, such a disaggregation is not warranted in the Post-secondary education or justice services assessments.
- 17 Notwithstanding this need to customise the classification in different contexts, having a common structure to the classification of age will assist in undertaking transparent analysis. For example, if all categories involved a split of the under 65 and the 65 and over populations, it would be possible to quantify the impact that a State's above average share of the 65 and over population has on its GST share.
- 18 Having a common structure with fewer unique categories, would also reduce the size of the datasets that would be needed, thus simplifying the assessments and reducing the prospect of errors.
- 19 The principle that we should have common structures to our classifications is best demonstrated with age, but is valid in other classifications.

Figure 36-1 Age groups used in 2010 Review categories

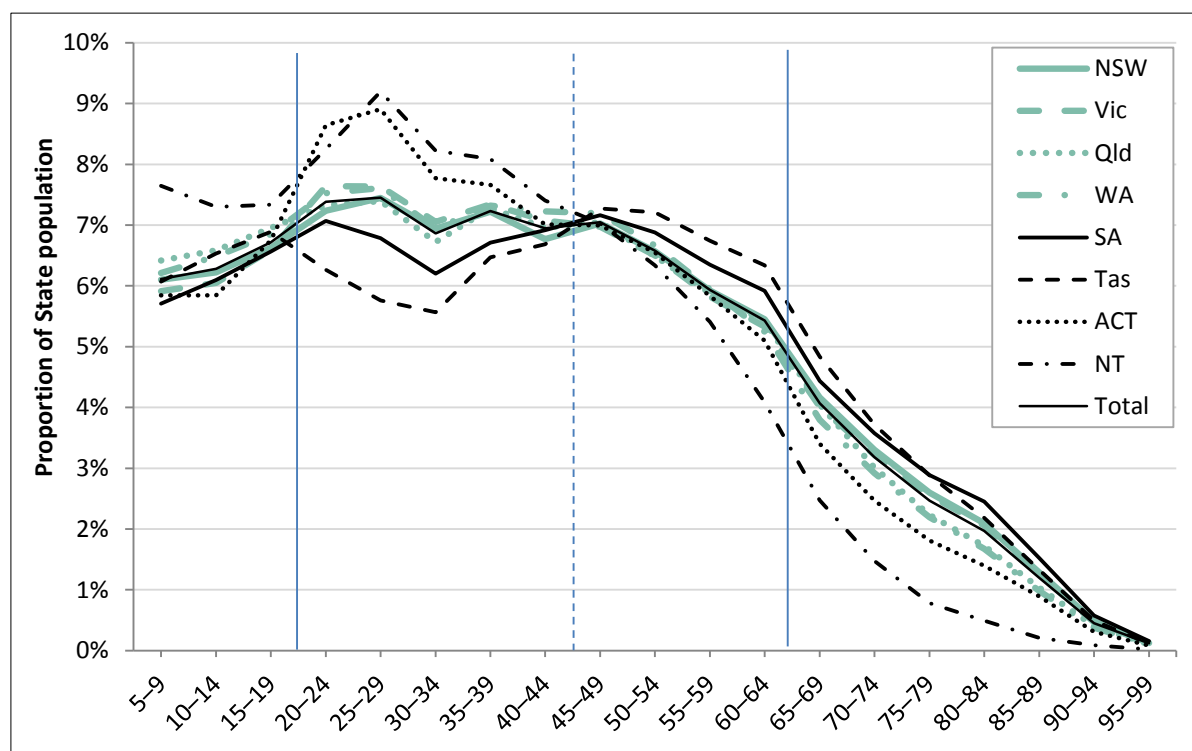
Age group	Post Secondary	Admitted patients	Community health	Welfare	Justice
0					
1-4					
5-9					
10-14					
15-19					
20-24					
25-29					
30-34					
35-39					
40-44					
45-49					
50-54					
55-59					
60-64					
65-69					
70-74					
75-79					
80-84					
85+					

- 20 We propose that in the 2015 Review, the major age groups be 0-14; 15-64 and 65+. This structure reflects how this classification is used in a range of social and economic statistics, and has been generally adopted within our classifications. From the 2010 approach, only two categories did not use this major breakdown of the classification: Admitted patients and Justice services.
- 21 **0-14 year olds.** In some categories, it may be material to further disaggregate this group. 0 year olds have been separated from 1-4 year olds in admitted patients because of very different use rates. However:
- Some estimates, notably Indigenous population estimates, are not available by this breakdown and need to be imputed from 0-4 year olds.
 - The quality of the data is considerably lower than for broader age groups, as errors or delays in processing of birth registrations can lead to significant errors in estimates of State shares of 0 year olds.
 - In the 2013 Update, separating 0 year olds from 1-19 year olds was not material, redistributing \$7 per capita to the Northern Territory.
- 22 No breakdown to single year of age, particularly of 0 year olds, is recommended.
- 23 0-4 and 5-14 would be a better breakdown for health services, while 0-9 and 10-14 would be more appropriate in justice services, given the legal standing of different age groups.
- 24 Given that the health assessments are considerably larger than the justice assessment, it is more likely that the health breakdown would be material. In addition

to this, 5-14 would be more consistent with ten year age groups in the 15-64 grouping. Therefore, we recommend that the 0-14 year olds be divided, if necessary, into 0-4 and 5-14; and if further disaggregation is necessary 0-4; 5-9, 10-14.

- 25 **15-64 year olds.** The breakdown of 15-64 year olds may be necessary in certain categories, as use rates vary considerably between different age groups within this range. As our primary focus is the difference in the distribution of populations between States, we should be guided by the patterns in Figure 36-2. South Australia and Tasmania have considerably below average shares of 15-44 year olds, and above average shares of 45-64 year olds, because the younger populations leave these States.

Figure 36-2 Age structure of State populations, 2009-10



Source: Commission calculations

- 26 **65 and over.** It would be practical to divide the 65 and over either into 65-74 and 75 and over; or 65-84 and 85 and over. 75-84 year olds are more similar to the 85 and over than to the 65-74 year olds in terms of their interstate distribution. 65-74 year olds represent over half the entire group. As such, we consider that the most appropriate primary breakdown to be 65-74 and 75 and over. Based primarily on the very small numbers involved, we do not consider a breakdown of the 85 and over population is warranted in any category.
- 27 **Proposed structure.** Figure 36-3 shows the proposed structure for disaggregating age. Any age group could be divided to the levels below it, so it is possible to have different values from different levels of the classification. For example, it would be

possible, under these rules, to break age down to 0-14, 15-44, 45-54, 55-64, 65-74 and 75+. It is possible to use different levels of the classification in different ages, depending on where material differences are in each category.

- 28 While the classification allows for disaggregation down to 5 year age groups, this is not expected to be necessary in any category.

Figure 36-3 Proposed age group structures

Age group	Major	Minor	10 year groups	5 year groups
0-4	0-14	0-4	0-4	0-4
5-9		5-14	5-14	5-9
10-14				10-14
15-19	15-64	15-44	15-24	15-19
20-24			25-34	20-24
25-29				25-29
30-34				30-34
35-39			35-44	35-39
40-44				40-44
45-49		45-64	45-54	45-49
50-54			55-64	50-54
55-59				55-59
60-64				60-64
65-69	65+	65-74	65-74	65-69
70-74		75+	75-84	70-74
75-79				75-79
80-84			85	80-84
85+				85+

Staff propose to recommend the commission:

- adopt a standard approach to the selection of age groups in assessments.

REMOTENESS

- 29 In the 2010 Review, many of the commission's assessments recognised that the costs States incur in providing a given service are affected by where people live. The commission used the State-based Accessibility and Remoteness Index of Australia (SARIA)¹¹⁴ to classify where people live and to measure the population in each region.
- 30 States were consulted on a proposed move to the ABS remoteness areas from May through to July 2013. For reasons discussed in detail in the papers circulated during that period, staff propose to use ABS remoteness areas as the standard classification of remoteness.

¹¹⁴ Developed to Commission specifications by the National Centre for Social Applications of Geographical Information systems (GISCA), The University of Adelaide.

Staff have recommended, and the commission has decided to:

- adopt the ABS remoteness areas as the standard classification of remoteness.

Aggregation of remoteness areas

- 31 In the 2010 Review, we either used 5 remoteness areas: Highly accessible, Accessible, Moderately accessible, Remote and Very remote; or we aggregated these into two groups: Remote and Non-remote. In the 2015 Review, this approach seems appropriate.

URBAN CENTRES/AREAS

- 32 In the 2010 Review, the Commission also used the population located in urban centres in a number of its assessments. The way these centres are defined varied between assessments.
- In Transport, urban centres (UCLs) with a population over 20 000 were used.
 - In Roads, urban areas were defined as ABS statistical districts with a population over 40 000 for the split between urban and rural roads. In the mapping algorithm used to define the rural road network, distances between UCLs of over 400 were used, but road lengths within statistical districts were excluded (these were included as urban roads).
 - In services to communities, urban centres of 200 to 1,000 were used.
- 33 In the 2015 Review, we propose to use UCLs as the primary measure of assessments that relate to urban form. However, in certain instances we need to make adjustments to better reflect what States do.
- Urban transport is often provided as an integrated network across closely neighbouring UCLs. Therefore, in the Transport services category we propose that all UCLs within a Significant Urban Area (SUA) should be aggregated and treated as a single UCL. We consider that this generally better reflects how States deliver this service.
 - In services to communities, we consider that electricity subsidies are provided in remote and very remote towns of 50 to 1 000 people. Because UCLs are not defined for towns of below 200, we have defined them using aggregations of mesh blocks using similar criteria to the ABS in defining these as urban.
- 34 These adjustments and the other category specific criteria to how UCLs are used in each category are discussed in the relevant chapters:
- Roads
 - Transport services
 - Services to communities.

- 35 While we are making adjustments to the standard ABS classifications, we will do this on a more systematic basis. We will no longer:
- manually determine groupings of UCLs in Hobart and Darwin in the Transport assessment
 - use different definitions of urban areas for different aspects of the Roads assessment.

Staff propose to recommend the commission:

- use UCLs to measure urban population, as described in the category chapter.

SOCIO-ECONOMIC STATUS

- 36 One of the attributes of the population that we use in our assessments in SES. In the 2010 Review this was measured using the Socio-Economic Index for Areas (SEIFA). In the 2015 Review, we are intending to recommend using a separate measure of SES for the Indigenous and non-Indigenous populations. However, these would remain area based measures and be similar to SEIFA. This is discussed in more detail in the Indigeneity and SES chapter.

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Alison Harper (02) 6229 8893	Schools education and Post-secondary education Justice services and Services to industry Economic development
Anthony Nichols (02) 6229 8833	Interstate wages Service delivery scale and regional costs Administrative scale, CALD and other demography
Priscilla Kan (02) 6229 8849	Budget analysis Data requests Quality assurance