

The Senate

Select Committee into the Scrutiny
of Government Budget Measures

Second interim report

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Membership of the Committee

Members

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Senator Richard Di Natale (Chair until 15.06.2015)	AG, VIC
Senator Sam Dastyari (Deputy Chair until 25.02.2016)	ALP, NSW
Senator Lisa Singh (Deputy Chair from 25.02.2016)	ALP, TAS
Senator the Hon Eric Abetz (from 23.02.2016 – 15.03.2016)	LP, TAS
Senator the Hon Matthew Canavan (from 17.07.2016 – 23.02.2016)	NATS, QLD
Senator Sean Edwards (from 12.10.2.2015)	LP, SA
Senator Sue Lines	ALP, WA
Senator the Hon James McGrath (until 12.10.2015)	LP, QLD
Senator James Paterson (from 15.03.2016)	LP, VIC
Senator Dean Smith	LP, WA
Senator Anne Urquhart	ALP, TAS

Substitute Members

Senator Carol Brown (substituted for Senator Sue Lines 21.03.2016 – 30.04.2016)	ALP, TAS
Senator the Hon Kim Carr (Substituted for Senator Anne Urquhart 21.03.2016 – 10.04.2016 and 18.04.2016 – 10.05.2016)	ALP, VIC
Senator the Hon Anne Ruston (Substituted for Senator the Hon Matthew Canavan 12.12.2014)	LP, SA
Senator Scott Ludlam (Substituted for Senator Richard Di Natale 12.12.2014)	AG, WA

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Senator Carol Brown	ALP, TAS
Senator David Bushby	LP, TAS
Senator Scott Ludlam	AG, WA
Senator Bridget McKenzie	NATS, VIC
Senator Nicholas McKim	AG, TAS
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Senator Janet Rice	AG, VIC

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List of Recommendations

Recommendation 1

7.9 The committee recommends that the federal government increase its level of borrowing to fund productivity enhancing infrastructure.

Recommendation 2

7.10 The committee recommends that the federal government issue infrastructure bonds to fund federal, state, territory and local government investment in infrastructure.

Recommendation 3

7.14 The committee recommends that the federal government utilise the inverted bid model when seeking to attract private equity finance.

Recommendation 4

7.21 The committee recommends that the access by state and territory governments to funding from infrastructure bonds is contingent on the introduction of broad-based land tax.

Recommendation 5

7.26 The committee recommends the establishment of an independent infrastructure fund to manage federal government funding and spending for infrastructure.

Recommendation 6

7.27 The infrastructure fund would be overseen by an independent board. The fund would manage Commonwealth grants for infrastructure and the distribution of funds raised by infrastructure bonds. The fund would also be empowered to attract and manage private equity investment.

Recommendation 7

7.33 The committee recommends that a project assessment be required for all projects seeking federal funding and that this project assessment be published prior to a funding decision being made.

Recommendation 8

7.36 The committee recommends that the level of detail required for project assessment should be graded according to the scale of the project, with larger projects being required to undertake more detailed cost-benefit analysis. Similarly, the time period between publication of project assessment and a funding decision should be graded according to the scale of the project, with evaluations for larger project being required to be made public for a longer period before a funding decision is made.

Recommendation 9

7.36 The committee recommends that the government consider widening Infrastructure Australia's powers to include the responsibility for all project assessment for projects seeking federal funding.

Recommendation 10

7.37 The committee recommends that the government consider diverting resources currently provided to the Department of Infrastructure and Regional Development for project assessment to Infrastructure Australia.

Recommendation 11

7.39 The committee recommends that the criteria for project assessments include the proposed project's adherence to relevant federal, state, territory and/or local government infrastructure plans.

Chapter 1

Introduction

Referral

1.1 On 25 June 2014, the Senate resolved to establish the Select Committee into the Abbott Government's Budget Cuts. The committee was established to inquire into the effect of cuts or changes in the Commonwealth budget and provide a final report to the Senate on or before 20 June 2016, with particular reference to:

- a) any reductions in access to services provided by the Commonwealth;
- b) the provision of other services, programs or benefits provided by the Government affected by the budget;
- c) Commonwealth-state relations and the impact of decreased Commonwealth investment on service delivery by the states;
- d) the fairness and efficiency of revenue raising;
- e) the structural budget balance over the forward estimates and the next 10 years;
- f) the reduced investment in scientific research and infrastructure and its impact on future productivity;
- g) public sector job cuts;
- h) the impact of the budget on retirement incomes and pensions;
- i) intergenerational mobility;
- j) the impact of the budget on young people and students;
- k) the impact of the budget on households; and
- l) other matters the committee considers relevant.¹

First interim report

1.2 On 4 February 2015, the committee tabled an interim report focused on the following issues:

- changes to Newstart allowances, including the raising of the eligibility age from 22 to 24 and introducing a six-month waiting period for new claimants before they receive benefits;
- the cessation of funding for important programs such as Youth Connections and RecLink Australia; and
- the deregulation of Australia's higher education system and funding cuts for schools and the vocational education and training (VET) sector.

1 *Journals of the Senate No. 36—25 June 2014*, pp 1000-1001.

1.3 The committee subsequently held hearings into the effect of budget cuts on the Australian Securities and Investment Commission (ASIC) and Australia's public broadcasters, the ABC and SBS. The committee also held a public hearing to speak to the Treasury about the assumptions underpinning the Intergenerational Report released on 5 March 2015.²

Committee name change

1.4 On 11 August 2015, the Senate agreed to change the name of the committee to the Senate Select Committee into the Scrutiny of Government Budget Measures to more accurately reflect the ongoing work of the committee.³

Areas of inquiry for this report

1.5 As per Terms of Reference c, e, f and h, the committee agreed to investigate infrastructure financing and expenditure by the Australian government and its effect on the broader economy, including:

- current trends in the levels of public infrastructure and private capital investment;
- changes to productivity and well-being projected to result from public infrastructure investment;
- long-term economic impact of public infrastructure investment, including private sector investment that leverages off public infrastructure provision;
- capacity for the budget to absorb debt to fund infrastructure;
- potential funding mechanisms for public infrastructure investment, including infrastructure bonds and sovereign wealth funds; and
- potential funding sources for public infrastructure investment, including superannuation funds.

Conduct of the inquiry⁴

1.6 The committee directly contacted a number of relevant organisations and individuals to notify them of the inquiry and to invite submissions.

1.7 The committee invited a number of organisations to make submissions to this phase of the inquiry by the end of July 2015, which was subsequently extended to 3 December 2015. A list of all submissions received by the committee is available at Appendix 1.

2 The Hansards from these hearings are available from the committee website: www.aph.gov.au/select_budgetmeasures.

3 *Journals of the Senate No. 104*—11 August 2015, p. 2900.

4 Details of the inquiry were placed on the committee's website at: www.aph.gov.au/select_budgetmeasures.

1.8 In relation to this inquiry, the committee held public hearings in: Sydney on 14 August 2015; Perth on 9 October 2015; Melbourne on 5 November 2015; Hobart on 6 November 2015; Canberra on 1 March 2016 and Hobart on 14 April 2016.

1.9 Relevant submissions and the Hansard transcripts of evidence from public hearings can be accessed online through the committee's website.

Context

1.10 In the immediate post-war era, governments predominantly bore the responsibility for and cost of providing infrastructure, including by taking on public debt.⁵ In more recent decades, governments have looked to models of infrastructure provision that have expanded the role of private sector financing, management, and ownership.

1.11 This coincided with a period in which, generally speaking, government debt has decreased⁶ as has public investment in infrastructure.⁷ In recent years, this trend has abated⁸ somewhat as governments have sought to stimulate the economy in the aftermath to the global financial crisis (GFC). However, federal and state government budgets remain subject to fiscal pressures.⁹

1.12 Given this outlook, there is a need to consider the levels of public infrastructure expenditure, and the financing of this infrastructure from public and private sources.

Terminology

1.13 Infrastructure is usually categorised as economic or social. The Productivity Commission (PC) provided the following definitions:

Economic infrastructure — incorporates the physical structures from which goods and associated services are used by individuals, households and industries, including rail, roads and public transport, water and energy networks, ports and airports.

Social infrastructure — includes the facilities and equipment used to satisfy the community's education, health and community service needs, such as hospitals and schools.¹⁰

5 KPMG, *Public Private Partnerships, Emerging Global trends and the implications for future infrastructure development in Australia*, June 2015, p. 1.

6 Professor Steve Keen, *Submission 64*, Figure 1: Australian government debt as a percentage of GDP, p. 3.

7 Dr Robert Bianchi, *Submission 66*, p. 3.

8 Ms Marion Terrill, *Submission 65*, pp 2-3; Productivity Commission, *Public Infrastructure, Inquiry Report No. 71 (2014)*, Volume 1, p. 57

9 Department of Infrastructure and Regional Development, *Trends: Infrastructure and Transport to 2030 (2014)*, p. 6.

10 Productivity Commission, *Public Infrastructure, Inquiry Report No. 71 (2014)*, Volume 1, p. 54.

1.14 This inquiry has focused on economic infrastructure that is publicly accessible. This reflects the nature of the submissions received as well as the constraints of the terms of reference on this committee.

1.15 The PC report detailed the difference between funding and financing:

The terms 'funding' and 'financing' are often conflated. For the purposes of this inquiry, funding refers to the revenue-raising sources and streams to pay for the costs of infrastructure over its life (such as user charges). Financing refers to the supply of capital (private or public) used to pay for the upfront investment costs of an infrastructure project. The term public private partnership (PPP) is used broadly [by the PC] to cover procurement models involving some privately financed investment.¹¹

1.16 This distinction was also highlighted by Infrastructure Australia in their recently released Infrastructure Plan:

Funding refers to how infrastructure is paid for. Ultimately, there are only two sources of funding for infrastructure, either taxpayers through government spending or directly by users, such as through electricity charges or road tolls.

Financing refers to the supply of capital, such as loans and equity, used to pay for the upfront investment costs of an infrastructure project. The sources of funding are then used to pay back the money raised through the initial financing.¹²

1.17 While this committee report has sought to follow this distinction in its summary of evidence, conclusions in relation to funding and financing—and all other issues examined—have been brought together in the final chapter. The evidence received by the committee tended to consider funding and financing in combination. Further, there is an inextricable link between the two issues when seeking to make recommendations about government budget measures.

Structure of this report

1.18 This report consists of seven chapters:

- Chapter 1 (this chapter) sets out administrative matters and provides a brief overview of the terms of reference for this phase of the inquiry.
- Chapter 2 outlines the importance and benefits of investing in infrastructure; and the roles and responsibilities of governments and their agencies.
- Chapter 3 examines the current planning and decision-making processes, and covers options to improve these processes.

11 Productivity Commission, *Public Infrastructure*, Inquiry Report No. 71 (2014), Volume 1, pp 4-5.

12 Infrastructure Australia, *Australian Infrastructure Plan – Priorities and reforms for our nation's future* (2016), Report, p. 90.

- Chapter 4 considers the level of spending on infrastructure; and the relationship between spending and desired level of service.
- Chapter 5 considers funding and discusses options to increase funding for infrastructure.
- Chapter 6 examines instruments for infrastructure financing.
- Chapter 7 brings together the committee's views and makes recommendations.

Acknowledgements

1.19 The committee thanks all the individuals and organisations who have participated in this inquiry through making submissions or attending public hearings.

Chapter 2

Benefits of infrastructure and responsibility for delivery

2.1 This chapter outlines the benefits of investing in public infrastructure; the responsibilities for planning and delivering public infrastructure in Australia; and the roles of key government bodies and agencies.

Benefits of investing

2.2 The Australian Academy of Technological Sciences and Engineering (ATSE) 2014 policy statement outlined the broad benefits of investing in infrastructure:

[Infrastructure] underpins productivity growth, supports a growing population, sustains industry growth, boosts competitiveness, enhances societal wellbeing and connects rural and urban environments.¹

Economic benefits

2.3 The 2014 Productivity Commission (PC) report highlighted that infrastructure investment directly affects the level of economic activity. The PC commented on the central importance to the economy of delivering and maintaining public infrastructure:

Efficient public infrastructure plays a key role in a competitive and productive economy and the ongoing funding and financing of infrastructure development in Australia is therefore of critical importance.²

2.4 Investment in infrastructure is seen as central to Australia's economic wellbeing, as outlined by the Department of Infrastructure and Regional Development (DIRD):

Investing in high-quality infrastructure has the capacity to stimulate and enhance the productivity of the economy in both the short and long term. It is an investment that has a multiplier effect throughout the economy, generating lasting economic, social and environmental benefits.³

2.5 The economic benefits of infrastructure were also recognised by Standard & Poor's Ratings Services:

Investing in high-quality infrastructure can create jobs, generate demand, and enhance efficiency, lowering costs for businesses and governments, and generating a so-called "multiplier effect" on GDP growth.⁴

2.6 The PC also observed that improved public infrastructure can create benefits in related markets including:

1 ATSE, 'Infrastructure to Meet Australia's Future Needs', Policy Statement (November 2014).

2 Productivity Commission, *Public Infrastructure*, Inquiry Report No. 71 (2014), Volume 1, p.V.

3 Department of Infrastructure and Regional Development, 'Infrastructure' at <https://infrastructure.gov.au/infrastructure/> (accessed 25 September 2015).

4 *Submission 63*, p. 4.

- transport infrastructure that provides business with access to new port facilities can promote competition in stevedoring services and shipping
- communication networks increase the opportunity for collaboration and innovation
- ports and airports provide access to international markets and the benefits of international trade in goods and services
- rail systems built in the nineteenth and twentieth centuries established patterns of urban settlement on Australia's east coast that are highly valued today in the housing market
- urban roads, public transport and telecommunication networks can improve the amenity of cities and improve economies of agglomeration and contribute to innovation.⁵

Productivity

2.7 Mr Philip Lowe, Deputy Governor, Reserve Bank of Australia, commented in a 2013 speech that investment in transport infrastructure could open new business opportunities:

One of the less obvious benefits [of investment in transport infrastructure] is what economists sometimes call agglomeration spillovers. Effective transportation networks deepen markets. They bring consumers closer to more businesses, and they bring workers in contact with more opportunities. These deeper markets and connections promote competition. They promote greater specialisation by both firms and workers. And they promote innovation and a more dynamic economy. While the internet has some of these same effects, person-to-person contact remains an essential part of business, education and innovation. Poor transportation makes this contact difficult and hurts our national productivity.⁶

2.8 Mr Saul Eslake, Economist, advised that despite the challenges involved, well-chosen infrastructure projects can enhance productivity growth⁷ and added:

This would be a good time to undertake infrastructure spending that both meets economic or social needs, can pass and be shown to pass reasonable cost-benefit tests, and which would put to work labour and capital that is currently lying idle.⁸

2.9 Ms Jane McGill, Senior Policy Adviser Infrastructure, Industry Super Australia also spoke about the contribution of infrastructure to productivity:

5 Productivity Commission, *Public Infrastructure*, Inquiry Report No. 71 (2014), Volume 1, pp 59-60.

6 Mr Philip Lowe, 'Productivity and Infrastructure', Speech to the IARIW-UNSW Conference on Productivity Measurement, Drivers and Trends, Sydney (26 November 2013).

7 *Committee Hansard*, 14 August 2015, p. 1.

8 *Committee Hansard*, 14 August 2015, p. 4.

Obviously there are some very useful things that flow from infrastructure in terms of the broader economy. When we invest in infrastructure we do achieve productivity gains in the economy. As the population ages and as the workforce participation decreases, productivity is the only way that we are going to be able to sustain living standards, and there is certainly plenty of evidence of the link between infrastructure and productivity.⁹

Social benefits

2.10 The PC noted the benefits social infrastructure such as schools and hospitals can have:

...important direct benefits to individuals and can also have broader economic implications. For example, improved education and health outcomes can lead to increased workforces participation and labour productivity.¹⁰

2.11 Standard & Poor's Ratings Services recognised that investment in social infrastructure would benefit future generations:

Any discussion on future infrastructure planning should take into account our growing social infrastructure needs. Lifting more people out of poverty and entrenched disadvantage would likely be good for the economy. Too much inequality can be a drag on long-run economic growth.

Encouraging the development of the nascent social impact investment sector may increase efficiency, effectiveness and innovation to solve entrenched social issues, and attract a broader spectrum of investors over time to scale up proven ideas.¹¹

Responsibility for delivery

2.12 In its 2014 report, the PC explained that Australian governments have historically taken responsibility for most aspects of public infrastructure provision, noting:

In part, this was due to a desire to ensure equitable access to services across the community and because there is a range of 'market failures' that would lead to inadequate provision if decisions were left entirely to the private sector.¹²

2.13 In more recent decades, private investment in public infrastructure has grown, principally as a result of the privatisation of formerly government owned assets and services.¹³

9 *Committee Hansard*, 5 November 2015, p. 7.

10 Productivity Commission, *Public Infrastructure*, Inquiry Report No. 71 (2014), Volume 1, p. 59.

11 *Submission 63*, p. 2.

12 Productivity Commission, *Public Infrastructure*, Inquiry Report No. 71 (2014), p. 3.

13 Infrastructure Australia, *Australian Infrastructure Audit: Our Infrastructure Challenges Report – Volume 1* (April 2015), p. 48.

2.14 Nonetheless, government remains primarily responsible for planning and delivering public infrastructure.¹⁴ Table 1 outlines the *de facto* allocation of responsibility for the planning and delivery of infrastructure across the three tiers of government.¹⁵

*Table 1: Responsibility for infrastructure by level of government*¹⁶

Level of government	Economic infrastructure	Social infrastructure
Commonwealth	Aviation services (air navigation etc) Telecommunications Postal services National roads (shared) Local roads (shared) Railways (shared)	Tertiary education Public housing (shared) Health facilities (shared)
State	Roads (urban, rural, local) (shared) Railways (shared) Ports and sea navigation Aviation (some regional airports) Electricity supply Dams, water and sewerage systems Public transport (train, bus)	Educational institutions (primary, secondary and technical) (shared) Childcare facilities Community health services (base hospitals, small district hospitals, and nursing homes) (shared) Public housing (shared) Sport, recreation and cultural facilities Libraries Public order and safety (courts, police stations, traffic signals etc)
Local	Roads (local) (shared) Sewerage treatment, water and drainage supply Aviation (local airports) Electricity supply Public transport (bus)	Childcare centres Libraries Community centres and nursing homes Recreation facilities, parks and open spaces

2.15 Irrespective of the responsibilities at different levels of government, due to the vertical fiscal imbalance,¹⁷ the Commonwealth is the major source of infrastructure funding for the states and territories.

14 Productivity Commission, *Public Infrastructure*, Inquiry Report No. 71 (2014), Volume 1, p. 58. See also Ms Marion Terrill, *Roads to riches, Better transport investment*, Grattan Institute, April 2016, pp 11-12.

15 This table is based on 2004 Parliamentary Library research. The committee understands that this is the most recent work on the issue and the information is still relevant. See Productivity Commission, *Public Infrastructure*, Inquiry Report No. 71 (2014), Volume 1, p. 58.

16 Parliamentary Library, Research Paper no. 8, 2003-04, *The Commonwealth Government's Role in Infrastructure Provision*, Richard Webb, Economics, Commerce and Industrial Relations Group, 1 March 2004.

17 The large imbalance between the financial resources available to the two tiers of government and their respective expenditure responsibilities.

2.16 Mr Eslake, told the committee that even though the Commonwealth may have greater capacity to finance and fund infrastructure projects, the bulk of public sector infrastructure delivery rests with state, territory and local governments:

On average, over the past decade state and territory governments have accounted for 61 per cent of total public sector gross fixed capital formation, local government 16 per cent and the Commonwealth 19 per cent, much of which is in defence equipment purchases. This is despite the fact that the Commonwealth has significantly greater capacity to finance infrastructure spending both from its own recurrent revenues and via its borrowing capacity.¹⁸

2.17 This point was reinforced by Mr Raymond Tame, Chief Executive Officer, City of Armadale:

If you compare the taxation revenue capability of the different levels of government, federal collects 82 per cent of the tax and provides about eight per cent of the infrastructure. The state government collects 15 per cent of the tax and looks after about 56 per cent. Of course, that is understandable; states should be providing the heavy infrastructure. Local government capability is three per cent of the taxation base but we are looking after 36 per cent of the infrastructure.¹⁹

Local government

2.18 The committee heard submissions from local government representatives detailing a shift in responsibility for infrastructure to local government. Councillor Deidre Flint, Chair of Infrastructure of the Southern Tasmanian Council Authority, explained that state governments had transferred the cost of maintaining several infrastructure assets to local government:

The state government handed us 103 bridges back, in the 80s, without any consultation, which we now have to maintain. Since 2002, we have been replacing two to four wooden bridges a year, which is an enormous cost for us, and we have another two that we have to do. That does not mean the maintenance stops. We still have to do that as well.²⁰

2.19 The Western Australian Local Government Association (WALGA) in its submission argued that local governments have substantial infrastructure responsibilities but limited capacity to raise revenue:

This is particularly evident when one considers that the only form of taxation employed by Local Governments is property rates, whereas the State and Commonwealth Governments are able to use a range of taxes.²¹

18 *Committee Hansard*, 14 August 2015, p. 2.

19 *Committee Hansard*, 9 October 2015, p. 2.

20 *Committee Hansard*, 6 November 2015, p. 17.

21 *Submission 72*, p. 5.

2.20 WALGA outlined the exponential rise in responsibility for non-financial assets, such as parks and recreational areas. In the 2013-14 financial year WA local governments had responsibility for \$27.6 billion in non-financial assets:

The value of this stock of non-financial assets has grown at a rate of 8.9 percent per annum over the last ten years.²²

2.21 The (former) House Standing Committee on Economics, Finance and Public Administration inquired into local government and cost shifting. In its report, the committee concluded that:

The assessment of the true extent of cost shifting from other spheres of government to local government is extremely complex. There is no clear definition of cost shifting, so most representatives of local government were careful not to provide an estimate of the extent of cost shifting.²³

Key government bodies and agencies

Council of Australian Governments (COAG)

2.22 In December 2013, COAG established the Transport and Infrastructure Council (the Council) bringing together the Commonwealth, state, territory and New Zealand ministers with responsibility for transport and infrastructure along with the Australian Local Government Association. The policy responsibilities of the Council include:

- surface transport;
- transport safety and security;
- promotion of more efficient and environmentally conscious transport, including through vehicle emission standards and national cycling promotion;
- infrastructure policy and investment, including road, rail and ports; and
- infrastructure and related land use planning.²⁴

2.23 The objective of the Council is to:

...achieve a co-ordinated and integrated national transport and infrastructure system that is efficient, safe, sustainable, accessible and competitive. Achieving this objective will support and enhance Australia's economic development and social and environmental well-being.²⁵

22 *Submission 72*, p. 5, citing the Australian Bureau of Statistics, Government Finance Statistics, Australia 2013-14, (Cat. No. 5512.0).

23 (Former) House Standing Committee on Economics, Finance and Public Administration Inquiry into Local Government and Cost Shifting, available at http://www.aph.gov.au/Parliamentary_Business/Committees/House_of_Representatives_committees?url=efpa/localgovt/index.htm, p. 26.

24 See: <http://transportinfrastructurecouncil.gov.au/about/> (accessed 3 February 2016).

25 See: <http://transportinfrastructurecouncil.gov.au/about/> (accessed 3 February 2016).

Commonwealth agencies

2.24 The key Commonwealth agencies involved in infrastructure planning and funding are Infrastructure Australia (IA) and the Department of Infrastructure and Regional Development (DIRD).

Infrastructure Australia

2.25 IA is an independent statutory body established in 2008 to assist all levels of government in identifying and prioritising funding for nationally significant infrastructure projects. IA is expected to provide 'high quality advice on Australia's requirements for nationally significant infrastructure'.²⁶ As outlined in the 2015 Statement of Expectations by the Minister for Territories, Local Government and Major Projects:

The Australian Government expects Infrastructure Australia to contribute to the efforts of all levels of government to build a strong and prosperous economy by providing robust, independent and evidence-based advice on Australia's future infrastructure needs. This includes identifying gaps in Australia's infrastructure as well as creating a priority list, based on robust analysis and strategic long term planning, of nationally significant infrastructure proposals.²⁷

2.26 In May 2015, IA released the first audit of the nation's infrastructure. It provides:

...a top-down assessment of the value-add, or Direct Economic Contribution of infrastructure; considers the future demand for infrastructure over the next 15 years, and delivers an evidence base for further gap analysis, long term planning and future investment priorities.²⁸

2.27 On 17 February 2016 IA released its first 15 year Australian Infrastructure Plan. The Plan sets out 78 recommendations to address current infrastructure gaps and emerging infrastructure challenges. The Plan explores:

...the infrastructure challenges and opportunities Australia faces over the next 15 years and the solutions required to drive productivity growth, maintain and enhance our standard of living, and ensures our cities remain world class.²⁹

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- 26 Infrastructure Australia, Statement of expectations at <http://infrastructureaustralia.gov.au/about/accountability-reporting.aspx> (accessed 22 January 2016).
- 27 Statement of Expectations for the Board of Infrastructure Australia for the period 1 November 2015 to 30 June 2017 available from: <http://infrastructureaustralia.gov.au/about/role.aspx> (accessed 10 September 2015).
- 28 Infrastructure Australia, *Australian Infrastructure Audit: Our Infrastructure Challenges Report – Volume 1* (April 2015), p. 12.
- 29 Infrastructure Australia, *Australian Infrastructure Plan*, <http://infrastructureaustralia.gov.au/policy-publications/publications/Australian-Infrastructure-Plan.aspx> (accessed 18 February 2016).

2.28 At the time the Plan was released IA also released a reinvigorated Infrastructure Priority List, which identifies potential infrastructure solutions for investment over the next 15 years and will be updated regularly throughout each year.³⁰ The list does not indicate a commitment by government to fund the construction of the listed projects.³¹

2.29 Mr Philip Davies, Chief Executive Officer, IA, clarified the division of responsibilities between IA and the Department of Infrastructure and Regional Development:

We are not involved in the funding of the projects. Our role really goes up to the point where we assess projects and put them on the priority list. At that point the federal government, with state and territory governments, chooses what to fund, and that is done through the Department of Infrastructure and Regional Development. From that point onwards the Department of Infrastructure and Regional Development oversees the funding and delivery of those investments.³²

Department of Infrastructure and Regional Development

2.30 DIRD has responsibility for the 'design and implementation of the Australian Government's infrastructure, transport and regional development policies and programs'.³³

2.31 In 2012 the DIRD launched the National Infrastructure Construction Schedule (NICS). The NICS is a Commonwealth, state, territory and local government collaboration. The NICS provides industry and investors a public pipeline of infrastructure projects for development or investment.³⁴ The NICS includes construction projects valued from \$50 million for larger states, and \$20 million for smaller states, territories, local governments and councils. All projects are subject to planning and feasibility studies to test the project's validity prior to funding.³⁵ The NICS website lists upcoming government asset sales and feasibility studies to inform future investment.³⁶

2.32 The DIRD also coordinates a number of infrastructure investment and grants programs. One of the more recent grant programs established is the National Stronger

30 See <http://infrastructureaustralia.gov.au/policy-publications/publications/Australian-Infrastructure-Plan.aspx> (accessed 10 March 2016)

31 Infrastructure Australia, National Priority List at www.nics.gov.au/Home/PriorityProjects (accessed 21 January 2016).

32 *Proof Committee Hansard*, 1 March 2016, p. 10.

33 Australian Government Department of Infrastructure and Regional Development 'About the Department' <https://infrastructure.gov.au/department/about/index.aspx> (accessed 2 February 2016).

34 NICS, 'About NICS' at www.nics.gov.au (accessed 21 September 2015).

35 NICS, 'About NICS' at www.nics.gov.au (accessed 21 September 2015).

36 See www.nics.gov.au (accessed 21 September 2015).

Regions Fund (NSRF) which commenced in 2015 and provides \$1 billion of funding over 5 years to enhance infrastructure in regional communities. The NSRF is designed to assist disadvantaged regions or areas of disadvantage within a region by awarding infrastructure grants.³⁷ The grant must be matched on at least a dollar for dollar basis. The funded projects must deliver an economic benefit to the region beyond its construction.³⁸

State agencies

2.33 Most states appear to plan and manage infrastructure projects within a department.³⁹ However, some states have or are in the process of establishing infrastructure-specific agencies.

Infrastructure NSW

2.34 Infrastructure NSW (INSW) was established in July 2011 under the *Infrastructure NSW Act*.⁴⁰ INSW works as an independent decision-making authority⁴¹ with a board of leading business people with expertise in infrastructure and the state's senior public servants. INSW was established to:

...bring real change to the way infrastructure is delivered, and put infrastructure planning and decision-making where it should be, in the hands of experts.

And where politicians now or in the future decide to reject the advice of experts, it will be up to them to account for their decisions and actions. This bill lays the foundation for what's been missing for more than 10 years: Coordinated infrastructure planning across the whole of government, using the most efficient and effective funding mechanisms to deliver the best results.⁴²

2.35 INSW is linked to NSW's Department of Treasury. INSW requires state government projects that seek funding in excess of \$100 million or projects nominated by the Premier as a 'special project', to go through INSW. INSW utilises skills of experts such as Dr James McIntosh, Director of Land Use and Transport Integration Consulting:

37 Australian Government Department of Infrastructure and Regional Development 'NSRF' <http://investment.infrastructure.gov.au/funding/NSRF/index.aspx> (accessed 2 February 2016).

38 Australian Government Department of Infrastructure and Regional Development 'NSRF' <http://investment.infrastructure.gov.au/funding/NSRF/index.aspx> (accessed 2 February 2016).

39 SA – Department of Planning Transport and Infrastructure, QLD – Department of Infrastructure, Local Government and Planning, WA- Department of State Development, NT – Department of Infrastructure. Note- Responsibility for Infrastructure in the ACT appears to be shared across several portfolios.

40 *Infrastructure NSW Act 2011* NSW.

41 Infrastructure NSW, 'Our Board' <http://www.infrastructure.nsw.gov.au/about-us/our-board.aspx>, (accessed 2 February 2016).

42 The Hon. Michael Gallacher MLC, Minister for Police and Emergency Services NSW, Second Reading Speech, Legislative Council Hansard, 21 June 2011, p. 2923.

We review the project against a set of criteria and guidelines and we make our recommendations. As it goes through, the project gets steered through the Infrastructure New South Wales review—their guidelines—to make sure that it is achieving what they want.⁴³

Infrastructure Tasmania

2.36 In 2015, the Tasmanian Department of State Growth established Infrastructure Tasmania to:

...assess, prioritise, and review major economic infrastructure proposals, including the coordination of all infrastructure funding submissions to both the State and Federal Governments.⁴⁴

2.37 The new CEO, Mr Allan Garcia's role will be to:

...ensure the effective coordination, planning and assessment of all major infrastructure proposals in Tasmania, including rail, major roads, energy, ports and water and sewerage.⁴⁵

2.38 Mr Brenton West, CEO of the Southern Tasmanian Councils Authority described the work undertaken to date to set up this new body:

They have appointed a CEO. There is a body of work. He has set out a work plan that he is working towards. You can see all of that. I think it is in its infancy. We would be hopeful that this body would be a positive outcome. He has set a time line. He wants to develop a pipeline list of projects.⁴⁶

Infrastructure Victoria

2.39 On 3 September 2015, the *Infrastructure Victoria Bill 2015* was passed to establish Infrastructure Victoria which will:

...promote rigorous and transparent decision-making and improve public debate and build consensus for priority infrastructure projects. We will work with the community and stakeholders to develop a 30-year infrastructure strategy that identifies the infrastructure needed to support improved social, economic and environmental outcomes for Victoria.⁴⁷

2.40 The Infrastructure Victoria website indicates that its priorities include:

- preparing a 30 year Infrastructure Strategy to identify Victoria's infrastructure needs and how they can be met;
- providing advice to the government on infrastructure matters; and

43 *Committee Hansard*, 6 November 2015, p. 38.

44 See http://www.stategrowth.tas.gov.au/home/about_us/infrastructure (accessed 3 February 2016).

45 See http://www.stategrowth.tas.gov.au/home/about_us/infrastructure (accessed 3 February 2016).

46 *Committee Hansard*, 6 November 2015 p. 15.

47 See <http://www.infrastructurevictoria.com.au/> (accessed 3 February 2016).

- publishing research on infrastructure matters.⁴⁸

2.41 The Victorian Minister of Transport's second reading speech acknowledged the need for greater transparency around decision making:

...Government must prioritise and select the projects and reforms that deliver the highest public net benefit. These decisions are not easy, but they should always be based on evidence and robust, transparent analysis.

Transparency must underpin infrastructure decision-making because the community cannot, and should not, accept such decisions without being properly informed and involved.⁴⁹

Other bodies

Global Infrastructure Hub

2.42 Following an agreement by G20 leaders, the Global Infrastructure Hub was established in Sydney in November 2014 with Mr Chris Heathcote, the inaugural CEO. The website indicates the mandate of the hub is to:

...drive progress on its infrastructure agenda and to move engagement with the private sector beyond business as usual.

The Hub will work to address data gaps, lower barriers to investment, increase the availability of investment-ready projects, help match potential investors with projects and improve policy delivery.

The Hub will report to the G20 and work collaboratively with governments, the private sector, development banks and international organisations. According to the B20, the Hub could help unlock an additional \$2 trillion in global infrastructure capacity to 2030.⁵⁰

2.43 Mr John Fraser, Treasury Secretary, spoke about the Global Infrastructure Hub at a 2015 estimates hearing:

One of the key objectives of the Global Infrastructure Hub is to bring together a regimen for putting projects together so that, if a country or a state or indeed a local government, or even people from the private sector, want to design an infrastructure project, they will get the benefit of international experience—things on literally how to set up a contract; dispute resolution procedures; how to market it—and that is very much a supply-side effort.⁵¹

48 See <http://www.infrastructurevictoria.com.au/> (accessed 3 February 2016).

49 The Hon Jacinta Allan MLA, Minister for Public Transport Victoria, Second Reading Speech, Legislative Assembly Hansard, 24 June 2015, p. 2115.

50 See <http://globalinfrastructurehub.org/about/> (accessed 30 October 2015).

51 Senate Economics Legislation Committee, *Estimates Hansard*, 21 October 2015, p. 17.

Chapter 3

Infrastructure decision making and planning

3.1 This chapter explores infrastructure planning and decision processes. It considers the political dimensions, evaluation and transparency of project selection; and opportunities to improve planning and coordination.

Decision making

Political dimensions

3.2 The committee heard strong evidence on the need to 'de-politicise' or reduce the political dimension involved in decisions regarding infrastructure projects.

3.3 This issue is important to the consideration of this inquiry as it relates directly to the confidence of investors. The committee heard that—post-GFC—investors are more risk averse and therefore wary of investing in infrastructure projects that are not subject to transparent planning and decision making processes.

3.4 Mr Glenn Stevens, Governor of the Reserve Bank of Australia, has stated that:

The impediments to [good infrastructure planning] are not financial...The impediments are in our decision making processes and, it seems, in our inability to find political agreement on how to proceed.¹

3.5 Mr Saul Eslake, Economist, emphasised the need to reform the current system:

One of the things that has undermined public and market confidence in the desirability of governments borrowing money to fund infrastructure investment is the lack of confidence in existing institutional arrangements to ensure that the projects which are funded are the best projects that could be funded and are ones that will generate returns that are sufficient to service the debt which has been incurred in the construction of them and ultimately to pay it back.²

3.6 Standard and Poor's Ratings Services agreed, stating that de-politicising infrastructure would improve investment outcomes:

Depoliticising the current infrastructure debate and reframing the conversation with the public to focus on the outcomes of high-quality infrastructure investment could reduce the potential for sub-optimal or compromised solutions.³

3.7 Professor John Hewson, Economist, told the committee that:

1 Governor of the Reserve Bank, Mr Glenn Stevens, Address to the Economic Society of Australia Luncheon, 10 June 2015.

2 *Committee Hansard*, 14 August 2015, p. 3.

3 Standard and Poor's, Ratings Services, *Submission 63*, p. 2.

...right now we have too much short-term politics in what ends up being infrastructure. A lot of the infrastructure that is being built is not much better than a bandaid or a marginal improvement.⁴

3.8 However, witnesses including Peter Newman, Professor of Sustainability, from the Sustainability Policy Institute, Curtin University, questioned the practical realities of de-politicisation:

I think depoliticising is too much to ask because infrastructure is always going to have a political element to it...

...It was not depoliticised before; it was completely taken over by particular lobbies, and they were not very sensible.⁵

Project evaluation

3.9 Suggestions to de-politicise infrastructure centred on the requirement for a robust and transparent cost-benefit analysis.⁶

3.10 The Productivity Commission (PC) noted that some major public infrastructure projects have proceeded without sound and transparent cost-benefit analysis:

There are also examples where large public infrastructure projects have been approved without any formal analysis of their costs and benefits. Most notably, the National Broadband Network, Australia's largest public infrastructure project, was commenced without a cost-benefit analysis having been done. It also appears that detailed analysis of the project was focused, from a relatively early stage, on how best to implement the government's policy objectives, rather than considering the merits of different options (box 2.2).⁷

3.11 Another example is the proposed Melbourne East West Link project, where during a performance audit, the Australian National Audit Office (ANAO) found:

Neither stage of the East West Link project had proceeded fully through the processes that have been established to assess the merits of nationally significant infrastructure investments prior to the decisions by Government to approve \$3 billion in Commonwealth funding...⁸

4 *Committee Hansard*, 14 August 2015, p. 27.

5 *Committee Hansard*, 9 October 2015, p. 17.

6 For a discussion on the advantages and disadvantages of a cost-benefit analysis see Ms Marion Terrill, *Roads to riches, Better transport investment*, Grattan Institute, April 2016, p. 16.

7 Productivity Commission, *Public Infrastructure*, Inquiry Report No. 71 (2014), Volume 1, p. 104.

8 ANAO, Report No. 14 2015-16 Performance Audit, *Approval and Administration of Commonwealth Funding for the East West Link Project*, December 2015, p. 7. See also Ms Marion Terrill, *Roads to riches, Better transport investment*, Grattan Institute, April 2016, pp 40-42.

3.12 The committee heard suggestions that an independent body, such as IA, could take on more responsibility for decisions about infrastructure investment in order to facilitate de-politicisation of the decision processes.

3.13 Professor Hewson agreed with the need for greater financial transparency and suggested IA as an appropriate vehicle to achieve this. Professor Hewson advocated transcending short term politics:

...be prepared to put a structure in place that would transcend any individual government...Governments can state their priorities, they can compete with oppositions about which projects should get up and should not, and which ones they would try to prioritise and so on, but unless they stacked up to an Infrastructure Australia assessment of the social and economic benefits of those projects in the medium-term sense, they should not be pursued.⁹

3.14 Mr Eslake advocated that IA:

...as a body that would evaluate proposed infrastructure investments and rank them is very much in the direction of the kind of improvements that I think ought to take place. What I would like to see is all of these infrastructure projects subject to a cost-benefit analysis and the assumptions underpinning those cost-benefit analyses and the results of those cost-benefit analyses laid out publicly for everyone to see and projects ranked according to the results...¹⁰

3.15 However, Mr Eslake did not argue that there should be mandatory acceptance of IA's findings, but instead advocated for an obligation on politicians to publicly provide reasons for departing from this advice.¹¹

3.16 Professor Phillip O'Neill, Director, Centre for Western Sydney, University of Western Sydney, also cautioned that in his view infrastructure decisions would always be a political process as financial modellers from Infrastructure Australia cannot make those decisions:

These are political decisions. Politicians need to be informed by that modelling, but that modelling cannot determine the decisions government has to take.¹²

3.17 Professor O'Neill, while noting the importance of cost-benefit analysis to assist decision-makers, also emphasised that decisions about infrastructure will always be political. Professor O'Neill signalled that the processes cannot be handed over to IA completely.

It is not possible to take decisions about billions of dollars of expenditure of public or private money—with the property rights that are entailed, the

9 *Committee Hansard*, 14 August 2015, p. 26.

10 *Committee Hansard*, 14 August 2015, p. 4.

11 *Committee Hansard*, 14 August 2015, p. 4-5.

12 *Committee Hansard*, 14 August 2015, pp 13-14.

changes to community living and urban functioning, the political processes and zoning processes, and all the things that have to take place when you have these huge material objects, like WestConnex, implanted in a city—and evaluate them by a simple set of numerics housed in Infrastructure Australia, for instance, in another city—and evaluate them by a simple set of numerics housed in Infrastructure Australia, for instance, in another city. It is always going to be an intensely political process, and we are naive to think any way other than that.¹³

3.18 Professor O'Neill said that governments should:

...do the cost-benefit analysis but make it an input into a political decision making system.¹⁴

3.19 Ms Marion Terrill, Transport Program Director, Grattan Institute, cautioned that cost-benefit analysis needs to be undertaken with care 'using consistent methodologies to ensure true like-for-like comparisons of potential projects'.¹⁵ Ms Terrill also cautioned against shifting all infrastructure decision making power to IA as IA primarily considers projects that have the highest cost-benefit ratio. Independent bodies such as IA do not always consider the social and non-economic benefits when ranking infrastructure projects. IA may exclude important community projects on the basis of financial viability:

...it is likely that some parts of the community that are legitimately the concern of governments would not do well out of that. I think country towns would be an example of that. So it does not seem to me that a purely technical assessment is quite the way to go.¹⁶

Transparency

3.20 In the 2015 Australian Infrastructure Audit Report, the need for decision making transparency was recognised:¹⁷

Transparency is also a vital element of best practice planning, project selection and regulation practices. However, decision making in the infrastructure sectors often remains relatively opaque. Limited transparency in planning and project selection processes has caused concern in recent years, particularly when major infrastructure projects proceed without a cost benefit analysis, or without the results of such analysis being disclosed.¹⁸

3.21 This view was reiterated in IA's 2016 Infrastructure Plan:

13 *Committee Hansard*, 14 August 2015, p. 9.

14 *Committee Hansard*, 14 August 2015, p. 14.

15 See Ms Marion Terrill, *Roads to riches, Better transport investment*, Grattan Institute, April 2016, p. 42.

16 *Committee Hansard*, 5 November 2015, p. 4.

17 Australian Infrastructure Audit Report, April 2015, Vol 1, p. 5.

18 Australian Infrastructure Audit Report, April 2015, Vol 1, p. 41.

Making project data and analysis publicly available, including the publication of a project business case, exposes government processes to scrutiny, allowing assumptions to be tested and lessons to be identified and shared. As a result, the quality of analysis is improved and the likelihood of positive project outcomes is increased.¹⁹

3.22 Agreeing with these points, Ms Terrill argued that proposals should be considered in the light of long-term plans:

Transparency of business cases and their assumptions brings a discipline to governments either to choose the projects with the highest benefits relative to costs or to explain to the electorate why they are prioritising some other goal.²⁰

3.23 Ms Terrill mentioned that greater transparency would improve community confidence in infrastructure projects. The public scrutiny of project proposals would ensure that if a minister decided to support a project that did not meet the technical assessment; there would be an onus to justify the project's non-financial benefits.²¹

3.24 In a more recent report, Ms Terrill provided more detail on this aspect, citing the limited impact of bodies such as IA:

A better approach would involve three steps. Governments currently cherry-pick the evaluation method that suits the result they want. Instead, they should not be able to commit to a transport infrastructure project before tabling in parliament a rigorous like-for-like evaluation of the net benefit, conducted by an independent body.

Governments would then be free to make and defend decisions on the basis of a clear rationale for investment. Politicians would be less eager to invest in projects that don't stack up.²²

3.25 Ms Terrill suggested that there be automatic publication of business cases for major projects seeking government funding 'particularly the assumptions underlying the cost benefit analysis and the evidence in support of those assumptions, so that experts and the community can scrutinise proposals'.²³ Ms Terrill stressed:

I cannot see any reason why business cases cannot be published, and published before the successful tenderer is announced...²⁴

3.26 Ms Rebecca Douthwaite, Policy and Research Manager, Property Council of Australia (WA), also supported the transparency of business cases:

19 Infrastructure Australia, *Australian Infrastructure Plan – Priorities and reforms for our nation's future* (2016) – Report, p. 160.

20 *Committee Hansard*, 5 November 2015, pp 1-2.

21 *Committee Hansard*, 5 November 2015, p. 4.

22 Ms Marion Terrill, *Roads to riches, Better transport investment*, Grattan Institute, April 2016, pp 2, 18.

23 *Submission 65*, p. 6.

24 *Committee Hansard*, 5 November 2015, p. 4.

A big issue at the moment is that about two years ago the Economic Regulation Authority did an investigation into microeconomic reform, and a big finding of that was that the infrastructure processes in WA at the moment are sufficient. That was very strongly rejected by industry based on the fact that even a demand analysis for a new road is not available to the public. That sort of information at the very least would help improve decision making when private sector and community can be involved or at least can understand how those projects were selected.²⁵

3.27 Professor Newman agreed with the need for greater analysis and transparency of projects, commenting that 'getting the economic analysis transparently available is a very big step forward.'²⁶

Commercial-in-confidence

3.28 Commercial-in-confidence has been used as a key reason for not making a cost-benefit analysis public. Evidence presented to the committee did not support using commercial-in-confidence to avoid transparency and scrutiny. Mr Eslake stated:

...I do not think commercial-in-confidence criteria should be used to obscure appropriate public scrutiny of the decision making process here. I understand that there might be some things that do need to be kept confidential, but thinking of some recent major infrastructure projects that have either been put forward or been reversed, I do not think it enhances public confidence in the merits of these projects or in the decision making processes of governments that lead to them going forward or being rejected if cost-benefit analyses and the assumptions underpinning them are concealed from public scrutiny.²⁷

3.29 Professor O'Neill observed the tendency of governments to make conditions within contracts commercial-in-confidence. Professor O'Neill highlighted that secrecy made it difficult to learn from past infrastructure mistakes:

Whether you are an advocate of public sector efficiency or of the benefits of the market, what we do know is that efficient knowledge and learning from the past in order to improve to the future is at the core of economic progress. And here we have in the infrastructure sector—probably the newest emerging private economic sector in the world—governments intervening in ways that inhibit learning, because we do not know the conditions under which privatisations take place, so we cannot say: 'That is good. That is not working. This is working.'²⁸

3.30 The PC was also not persuaded that commercial-in-confidence considerations should mean cost-benefit analyses are not made public, concluding that typically the analysis is done prior to procurement. For this reason the data is unlikely to be commercially sensitive. Accordingly the PC was:

25 *Committee Hansard*, 9 October 2015, pp 39-40.

26 *Committee Hansard*, 9 October 2015, p. 17.

27 *Committee Hansard*, 14 August 2015, pp 4-5.

28 *Committee Hansard*, 14 August 2015, p. 11.

...[n]ot convinced that there are valid commercial-in-confidence reasons to withhold the release of full cost–benefit analyses. Even where data are provided by private participants, the normal presumption of transparency should prevail as a condition of involvement in government-backed projects.²⁹

3.31 The PC emphasised the need to publicise the cost-benefit analysis of large projects as a way of improving the transparency of decision making.³⁰ The PC concluded that such transparency:

...allows particular estimates (for example, of construction costs or patronage) to be debated and testing done on how the use of different estimates would affect the projects net benefits. Transparency can help to improve the quality of analyses because proponents and practitioners know that any flaws are likely to be exposed.³¹

Planning and coordination

3.32 The need to improve integrated planning was seen as another way to reduce the risks for infrastructure investors and depoliticise decision making. IA outlined that an integrated and well planned infrastructure system enables the community and its economy to connect:

It makes it easier for people to get to their jobs, ensures businesses can operate efficiently and enables the creation of dynamic communities with strong social ties.³²

3.33 In the Infrastructure Plan, IA indicated that to facilitate good practice in infrastructure decision making frameworks they will work in partnership with governments, business and the community to:

...identify National Governance Principles to help drive better infrastructure decision making. Key components of the National Governance Principles are likely to include:

- Development of long-term integrated infrastructure plans;
- Publication of full project business cases, including supporting data and analysis;
- Completion of in-depth community engagement, starting at the strategic planning phase; and
- Preparation and publication of robust post completion reviews.

29 Productivity Commission, *Public Infrastructure*, Inquiry Report No. 71 (2014), Volume 1, p. 105.

30 Productivity Commission, *Public Infrastructure*, Inquiry Report No. 71 (2014), Volume 1, p. 9.

31 Productivity Commission, *Public Infrastructure*, Inquiry Report No. 71 (2014), Volume 1, pp 92-93.

32 Infrastructure Australia, *Australian Infrastructure Plan – Priorities and reforms for our nation's future* (2016) – Report, p. 48.

The National Governance Principles would be relevant to infrastructure decisions at all levels of government, irrespective of the funding source or procurement mechanism used.³³

3.34 IA in its Infrastructure Plan commented that politicisation of the infrastructure decision process can result in 'plans wholly or partially being re-written following a change of government'.¹

3.35 This view was supported by Mr Martin Locke, Adjunct Professor, Faculty of the Built Environment, University of New South Wales. Mr Locke highlighted the need for long-term plans and commitments for infrastructure that:

...sees through political cycles and is somewhat bipartisan, if that can be achieved [or tripartisan]...is the key, in my opinion.³⁴

3.36 Ms Terrill pointed out that infrastructure projects are often pursued in marginal states or electorates.¹ Ms Terrill drew together the political nature of infrastructure decision making with issues relating to broader project selection and financing issues, pointing out that there is:

a widespread view from entities such as the Productivity Commission that governments have not made good infrastructure decisions and that they have been driven by electoral concerns, the desire to build big and iconic over small and useful and a desire to keep debt off public sector balance sheets.³⁵

3.37 Witnesses emphasised that in order to improve planning, projects should not be seen in isolation but seen as part of an integrated system. Dr Paul McLeod, Research Program Leader, Planning and Transport Research Centre, University of Western Australia, referred to transport to articulate this point:

Transport is not a project, it is a system. It is transport for the city and every project has to interconnect with all the other projects. The responsibility to make the whole system work usually lies with government.³⁶

3.38 Dr McLeod went on to describe that an integrated project, has to be considered through what makes the whole system work better:

You cannot really do it in an unintegrated way. You have to have the planners and the financiers, in a sense, working together to make sure that both sides get what is required.³⁷

3.39 Ms Terrill also indicated that looking at infrastructure as an integrated system means that small projects can make a big difference:

33 Infrastructure Australia, *Australian Infrastructure Plan – Priorities and reforms for our nation's future* (2016) – Report, p. 161.

34 *Committee Hansard*, 14 August 2015, p. 38.

35 *Committee Hansard*, 5 November 2015, p. 1.

36 *Committee Hansard*, 9 October 2015, p. 33.

37 *Committee Hansard*, 9 October 2015, p. 33.

Because of the networked nature of transport infrastructure, there will often be pinch points that will jeopardise the running of the whole system, even though of themselves they are quite small and they can be quite easy to fix. So we are seeing a lot more things like improving problematic intersections or ramp measurements to improve flow rates on freeways, which have nothing like the scale of expense of the projects that attract media attention but in fact can make a huge difference to the operation of a system as a whole.³⁸

3.40 Ms Debra Goostrey, Chief Executive Officer, Urban Development Institute of Australia (WA) also emphasised the need to stop looking at projects in isolation using Fremantle port as an example:

...the state government is looking at selling the Fremantle port. They need a new port but they are struggling with the funding of it. We had a project that was proposed a number of years ago to build a residential island off Fremantle. One of the things that could be done is to get the constructor of that to build the outer harbour and then transfer the land rights to enable the urban development on the current port site. So the state gets a new, fully automated port, the developers get an inner-city area that they can develop for high density, you get a new area for the cruise ships to come in, and you get freight efficiency. But we are not looking at how we can collectively solve complex problems.³⁹

3.41 The Property Council of Australia (WA) provided an assessment system to the committee which Mr Lino Iacomella, Deputy Executive Director, Property Council of Australia (WA) indicated facilitates a more holistic integrated approach.⁴⁰

3.42 The matrix was an outcome of research commissioned from Urbis based on best practice infrastructure.⁴¹ The Urbis review did not just look at the direct cost-benefit analysis around initial investment but rather at what that investment would activate long term. Ms Douthwaite explained how the approach was developed:

When you look at the investment in infrastructure, particularly as it relates to productivity versus broader economic benefits, for argument's sake, you can build a road anywhere in the state and it could increase productivity, but how do you unlock those greater, broader economic benefits that are attached to that investment? That is what we really wanted to understand. Obviously, coming from property, we wanted to look at how it would activate property development and those sorts of opportunities for our members. But we also wanted to look at those broader things—new markets, new industries, new supply chains.⁴²

38 *Committee Hansard*, 5 November 2015, p. 3.

39 *Committee Hansard*, 9 October 2015, p. 19.

40 *Committee Hansard*, 9 October 2015, p. 36.

41 Urbis is a consulting firm offering services in planning, design, property, social planning, economics and research.

42 *Committee Hansard*, 9 October 2015, p. 36.

3.43 Professor Michael Negnevitsky, appearing in a private capacity, spoke about factoring in the increasing use of renewable energy into long-term energy infrastructure planning:

What may happen in the future is that people may install solar panels on the roof and have reliable battery storage in the garage, and basically you will not need a distribution network. Five years ago I raised this question at the IEEE general meeting in the United States, and people were asking whether I had all my marbles.

Last year I had the same discussion in TasNetworks, but the other way around: they were asking my view of what may happen with the grid, because if the situation continues like this we will have a situation where middle-class Tasmanians—and not just Tasmanians but people all over Australia—will have a house that is an independent energy unit.⁴³

Long-term planning

3.44 The committee heard that another way to reduce politicisation and infrastructure risk is to improve the long-term planning of infrastructure projects.

3.45 Professor Hewson lamented the lack of enduring infrastructure planning:

...we have never had either the leadership or the financial capability in the annual budget structure that we have got, and the sort of constraints that that operates under, to contemplate a serious infrastructure strategy going forward... We have trouble thinking to next week or beyond a particular short-term issue.⁴⁴

3.46 The PC also noted the need for:

...appropriate long-term planning for corridors, rigorous demand forecasting, investigating project risks fully (including latent risks borne by governments)...⁴⁵

3.47 The findings of IA's 2015 Australian Infrastructure Audit report stressed the need for long-term planning, dealing with uncertainty, with current issues including:

- the implications of demographic change for Australian society generally and government finances in particular;
- the scope and direction of technological change; changes in the global economy;
- the future of work, e.g. where people work, incomes, and part-time work;
- and the prospect of climate change, and uncertainty as to how the international community will respond.⁴⁶

43 *Committee Hansard*, 14 April 2016, p. 66-67.

44 *Committee Hansard*, 14 August 2015, p. 26.

45 Productivity Commission, *Public Infrastructure*, Inquiry Report No. 71 (2014), p. 8.

46 Australian Infrastructure Audit Report, April 2015, Vol 1, p. 7.

3.48 Dr James McIntosh, Director of LUTI Consulting, explained that the way we live is changing which should change what we plan for in future. Dr McIntosh spoke about Generation Y:

...Victorian kids are getting their driver's licences, like, five years later than they previously were 10 years ago, and the percentage of I think it is 18- to 28-year-olds has actually dropped. So 15 per cent less are actually getting their driver's licences, and then they are getting them later. They have these public transport and active transport travel behaviours that they, from then on, tend to keep for the rest of their lives. What this basically means is they value it. They go, 'Well, I don't really want a car.' So their behaviour and their willingness to pay is driving up different values...⁴⁷

3.49 This view was echoed by Ms Debra Goostrey who spoke about automated vehicles as an illustration of the changing future infrastructure needs:

We have the automated vehicles on trial, as of next month, in Adelaide. We are looking at them becoming commercially available in the next 10 years and in Western Australia we are looking at a 10-year rollover in vehicle use. By 2030 they are going to be fairly common. We need to be planning our infrastructure to interface with these new technologies. That is one example, but there are many more where we need to look to the future, how we will be living, and making sure all our infrastructure is efficient and effective...⁴⁸

3.50 Ms Terrill indicated that it is possible to make reasonable predictions for long term planning. Although demands change over time, Ms Terrill indicated that we can make some pretty good assessments:

... of where people will live, where jobs will be, where people will get goods from, where they will want them and the changing nature of all that...

We also have some reasonable predictions about population growth which, even though it has come off in more recent times, we expect to be pretty strong over the next 20, 30 or 40 years. So there is no reason why we cannot make pretty good plans for 30 years.⁴⁹

3.51 Mr Raymond Tame, Chief Executive Officer, City of Armadale spoke about the need for long term planning to address population growth in places such as Perth. Mr Tame raised :

the need for a scheme for cultural and recreational facilities over the next 30 years, providing the basis for a population of a 1½ million people, that is funded over a five-year or a seven-year program—a series of such facilities that are setting up greater Perth...for the next 30 years.⁵⁰

3.52 Mr Tame stressed the need for integrated planning particularly to address the needs of growing areas:

47 *Committee Hansard*, 6 November 2015, p. 32.

48 *Committee Hansard*, 9 October 2015, p. 20.

49 *Committee Hansard*, 5 November 2015, pp 5-6.

50 *Committee Hansard*, 9 October 2015, p. 5.

...at the moment as soon as you work out a program that works for the entire population of Australia, taking in the regional needs and taking in the global city needs, you are not meeting the needs of these areas where the population is not yet there. Yet we know they are the dormitory suburbs and the voting suburbs of the future. So those people move in, they have paid out, they have made the biggest investment of their lives. And then they look around and say, 'Where is my bus system? Where is my train system? Where are my recreation opportunities?'⁵¹

3.53 Dr Vicki Gardiner, General Manager of Tasmania, Engineers Australia, when discussing the current electricity supply shortage in Tasmania emphasised the need for governance to implement long-term planning infrastructure and energy needs:

It is now just a matter of, 'Rather than looking at the short-term fixes, let's look at the midterm and at what is coming up over the longer term,' always bearing in mind that there needs to be a diversity of supply for energy security, with those opportunities for new technologies that are coming through.⁵²

Coordination between governments

3.54 In addition to improving the way infrastructure projects are planned, witnesses spoke about the need for better coordination between levels of government and agencies.

3.55 Mr Anthony Schinck, Chief Executive Officer, City of Ballarat said that:

I think the best results we will get from that is in fact a coordinated dialogue across the three tiers of government and, in particular, through agencies that have the capacity to depoliticise to a large extent those investment opportunities.⁵³

3.56 Ms Terrill mentioned that:

...the Commonwealth and the states have a relationship which means that the Commonwealth tries to skew state decisions. I think the Commonwealth can be frustrated that the states do not put up a lot of projects, but it seems that neither side is entirely happy with the activities of the other side. The states generate the project ideas for the most part, but the decisions are probably skewed by the way that funding is provided.⁵⁴

3.57 Mr John Brennan, Chair of the Tasmanian Polar Network, highlighted that the interplay between the Commonwealth, state and private investors has the capability to transform Australia, if done well. Mr Brennan spoke about the Antarctic and Southern Ocean sector:

51 *Committee Hansard*, 9 October 2015, p. 10.

52 *Committee Hansard*, 14 April 2016, p. 70.

53 *Committee Hansard*, 5 November 2015, p. 34.

54 *Committee Hansard*, 5 November 2015, p. 4.

We would not have this sector had it not been for the vision, over 30 years ago, of the federal government when it decided to invest in infrastructure in Tasmania and in placement of human resources here. It relocated two federal government departments here, one being the Australian Antarctic Division and the second one to follow being the CSIRO. It is really important to note that because it shows that federal government investment in infrastructure and people at the right time and in the right place can create a whole new industry...⁵⁵

3.58 Mr Sean Cameron, Manager Economic Development and Mr Schinck, raised the need for all levels of government to work in a coordinated way.⁵⁶ Mr Cameron used the Ballarat West Employment Zone as an example of three levels of government working together to 'de-risk' infrastructure.

...we are able to work with all three tiers of government to address the different productivity components...By having the correct evidence base and the strategic justification behind it, and understanding what productivity improvements could come and whether the private sector investment was real and what type of return they need to get to...happen, we were able to ensure that those public moneys from the whole three tiers of government were actually going to get the results that we required.⁵⁷

3.59 Mr Eslake also highlighted need for long term planning between levels of government for projects to succeed:

Public sector infrastructure projects are usually complex and require considerable planning, especially if they entail the acquisition of land; involve a large number of tenders for work underpinned by lengthy and complicated legal documentation; and take years to be completed. Legislative requirements, especially when more than one level of government is involved, as is often the case in Australia, add to the difficulties of matching the timing of infrastructure spending to the business cycle.⁵⁸

3.60 Ms Goostrey spoke about the difficulties of coordination with each agency having its own piece of self-protecting legislation.⁵⁹ Ms Goostrey outlined that when talking to agencies about coordination, they are in agreement, until the agencies meet to sort out the practicalities of a proposed infrastructure project:

...when it goes through the belly of the beast of the decision making process we dumb it down. From the development-industry perspective, they want to do awesome; instead, they are left with vanilla, because that is the only thing we can get through the system. From the federal government's perspective, as many of the decisions that are made at state and local

55 *Committee Hansard*, 6 November 2015, p. 34.

56 *Committee Hansard*, 5 November 2015, pp 33-34.

57 *Committee Hansard*, 5 November 2015, p. 40.

58 *Committee Hansard*, 14 August 2015, p. 1.

59 *Committee Hansard*, 9 October 2015, p. 20.

government level, it is the leadership on what principle based planning and decision making framework should be in place.⁶⁰

3.61 Mr Tame spoke about coordination of infrastructure projects and highlighted the coordination issues faced by councils:

We have offered our expertise and the facts that we have put here to bring the voices of the nine councils that ring Perth together to get a collective view and to sit around the table. We have submitted a couple examples of the infrastructure aspects that where we think we could contribute to the decision making. Then they would be able to feed into the planning, the purchase of appropriate land and possibly the funding of some of those regional facilities on a better coordinated basis. We also want to be at the table because we do not know how water, power and a number of those important infrastructure components forward planning is coordinated. At the moment, we suspect that each of those agencies has its own strategic plan and there is not really a recognition—for instance, our growth rates have outstripped all of their predictions over the years.⁶¹

Timeliness of delivery

3.62 Witnesses emphasised that affordable housing, on outer metropolitan fringes, does not mean affordable living as limited infrastructure exists. Mr Tame explained that if infrastructure is not constructed while housing is developed, generations can miss out on the amenities and lifestyles enjoyed by those in established suburbs.⁶²

3.63 The committee heard that the construction of infrastructure projects in new areas are not meeting the needs of the community soon enough:

...it is when you get to that higher level of the regional-type infrastructure the timing is so far out that people's living patterns and their travel patterns are created before you put the right infrastructure in place and they will never change. People move into a district and they have to have three cars in their family to get to their jobs and their play and all the rest. They do not change if you bring in a public transport system 15 or 12 years later. You have to have them in early enough.⁶³

3.64 Mr Tame also spoke about the need to ensure leisure, recreation facilities and wellbeing amenities are adequately funded for future generations:

I am talking about leisure, recreation, the opportunities for communities to be engaged in active sport and play but also community hubs that are created. Sport and recreation are not just about activity and fitness; it is where our future community leaders come from.⁶⁴

60 *Committee Hansard*, 9 October 2015, p. 20.

61 *Committee Hansard*, 9 October 2015, p. 7.

62 *Committee Hansard*, 9 October 2015, p. 2.

63 *Committee Hansard*, 9 October 2015, p. 3.

64 *Committee Hansard*, 9 October 2015, p. 3.

3.65 Dr McLeod, acknowledged that current processes mean that the provision of infrastructure falls behind in new areas and spoke of the need for jurisdictional planning strategies and creating a dialogue to address this:

...'What compromises are we prepared to make? Are you prepared to have smaller lots and higher density so we can get the services in et cetera?' That is a vehicle where at least you have the dialogue about whether this should happen or should not happen.⁶⁵

3.66 Dr McLeod spoke of the advantages of implementing a state planning framework, where you could stipulate that infrastructure needs to be done simultaneously with a suburbs development. Dr McLeod advocated for a planning framework rather than the traditional process of waiting for people to live in an area, waiting for enough kids to plan the school, then planning transport:

...One of the things about places that do have them is that they can either sit as nice things to do—but some jurisdictions have actually made them quite formal, in that all the elements of their jurisdictional planning strategy have to be signed off by the relevant agencies, who are then committing to say that if a development is approved the public transport will go, the parks will go, whatever will go, and it will be charged for in a particular way and financed in a particular way. That might mean some developments do or do not go ahead. The argument I have put on occasions is that you can have a strategy that is sort of optional—as in it is a good guideline or a good target; it may or may not happen. But some jurisdictions have actually made them quite concrete.⁶⁶

3.67 Mr Schinck spoke about the Regional Development Victoria model which is a 'leading example of regional development funding' providing a 'consistent pipeline of investment into projects that make good economic and social sense':

The other benefit...is having a department that has the ability to effectively broker the co-operation and participation of other government agencies in the delivery of projects. This is often an overlooked aspect or dimension of the current model, but I think it is one of the most valuable. It does three things: firstly, it provides a pipeline of committed government funding to those projects; secondly, it acts as a broker of interagency cooperation—so effectively an attempt to deliver a whole-of-government approach to a particular project or issue—and, thirdly, there is expertise within Regional Development Victoria that effectively connects those public projects to commercial markets.⁶⁷

65 *Committee Hansard*, 9 October 2015, p. 29.

66 *Committee Hansard*, 9 October 2015, pp 29-30.

67 *Committee Hansard*, 5 November 2015, p. 28.

Chapter 4

Infrastructure spending

4.1 This chapter looks at levels of spending on public infrastructure. It examines historic and current levels; patterns of public infrastructure spending; and renewed interest in the level of public infrastructure spending.

Historic and current levels of spending

4.2 In the aftermath of the Global Financial Crises (GFC), spending on public infrastructure in Australia has increased. In its 2014 report, the Productivity Commission (PC) provided the following analysis of spending on public sector engineering construction:¹

Since 2008, it has been equivalent to 2 per cent of GDP or more, whereas in the 20 years prior to that it was mainly between 1 and 1.5 per cent of GDP...In 2013, roads and related infrastructure accounted for about 43 per cent of the total...In recent years, private sector investment in economic infrastructure has been around the same level as public sector investment...²

4.3 Ms Marion Terrill, Transport Program Director, Grattan Institute, put this increase in an international context, stating that:

Australian infrastructure investment is still high by international standards, even though it has come down from its peak in about 2011. Over the past decade, spending by all levels of government has been particularly high, and Australian government spending on infrastructure has grown more quickly than spending in other parts of the budget.³

4.4 Mr Saul Eslake, Economist, confirmed that infrastructure spending had come off its peak and told the committee that engineering construction work done by or for the public sector has fallen from a peak of 2.3 per cent of GDP in the June quarter of 2011 to 1.7 per cent of GDP in the March quarter of 2015. Mr Eslake went on to say this is:

...a little above the levels of the two preceding quarters in which engineering construction work done by or for the public sector was smaller as a proportion of GDP since the September quarter of 2007. The volume of engineering commencements by or for the public sector and the pipeline of work still to be done on existing projects by or for the public sector have also been on a declining trajectory for some time.⁴

1 Public sector engineering construction is commonly used as a proxy for government investment in economic infrastructure.

2 Productivity Commission, *Public Infrastructure*, Inquiry Report No. 71 (2014), Volume 1, p. 57.

3 *Committee Hansard*, 5 November 2015, p. 1.

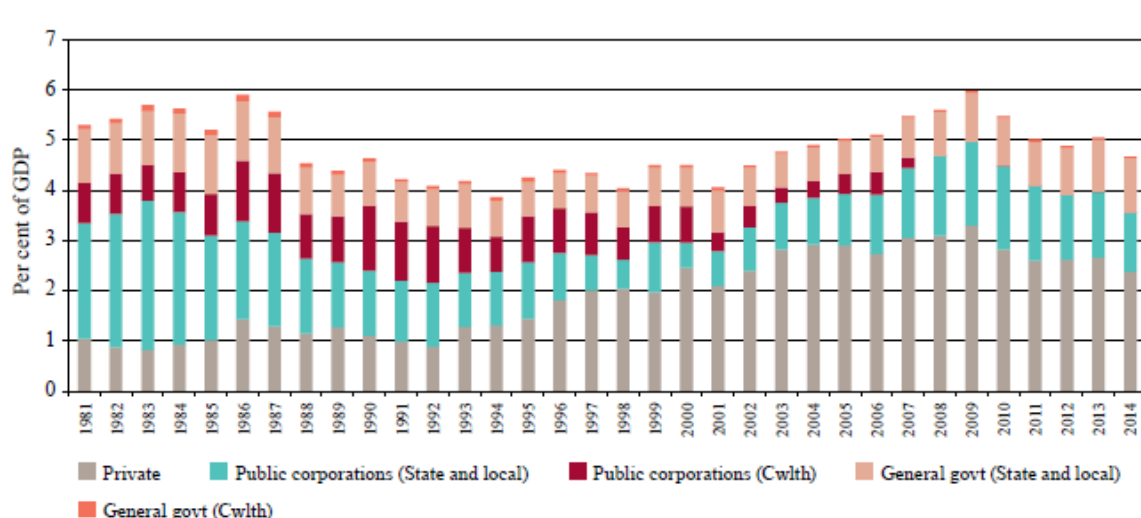
4 *Committee Hansard*, 14 August 2015, p. 2.

4.5 Dr Robert Bianchi, Associate Professor of Finance at Griffith University, took a longer view and provided evidence in his submission of a:

...a long-term structural decline in public infrastructure investment in past decades, both globally and in Australia.⁵

4.6 This view is supported in Infrastructure Australia's (IA) Audit Report on the level of expenditure on public infrastructure over the last three decades.

Figure 4.1: Public and private investment in transport, electricity, gas, water, waste and telecommunications infrastructure – 1981 to 2014 (year ending 30 June)⁶



Source: Infrastructure Australia analysis of Australian Bureau of Statistics (2015) data

Infrastructure shortfall

4.7 The committee heard divergent evidence on whether Australia has an infrastructure deficit and, if so, whether this deficit can be quantified.

4.8 In October 2012, IA published a paper 'Australia's Public Infrastructure, Part of the Answer to removing the Infrastructure Deficit' which noted:

There are various estimates of the infrastructure deficit in Australia, but one thing is consistently concluded, the gap is very large.⁷

4.9 IA's 2015 Audit Report stated that 'currently available data and information do not permit a detailed answer'⁸ to the question of how big the infrastructure gap is. However, IA did conclude that:

5 Submission 66, p 3.

6 Infrastructure Australia, *Australian Infrastructure Audit: Our Infrastructure Challenges Report – Volume 1* (April 2015), p. 48.

7 Infrastructure Australia, *Australia's public infrastructure, part of the answer to removing the infrastructure deficit*, October 2012, p. 4.

8 Infrastructure Australia, *Australian Infrastructure Audit: Our Infrastructure Challenges Report – Volume 1* (April 2015), p. 31.

Across various sectors, gaps in service quality already exist and will grow. These gaps are particularly evident in urban transport. Gaps in the quality and reliability of water services in some rural towns are also evident.⁹

4.10 The PC considered this question in its 2014 inquiry report and found a perception of an infrastructure deficit that was resulting in a renewed interest in private sector funding and financing of public infrastructure projects. The PC went on to note that Australia has a gap between current and required infrastructure stock, that estimates of the size of this gap vary, but that:

Many inquiry participants endorsed the notion that there was a substantial infrastructure deficit.¹⁰

4.11 During the hearings Industry Super Australia provided a figure from research undertaken by Infrastructure Partnerships Australia which determined that 'Australia will need about \$770 billion in capital investment over the next decade.'¹¹

4.12 The PC cautioned that 'reliance on the notion of an infrastructure deficit...could encourage poor investment choices'.¹² The PC observed that there was evidence of substantial community interest in infrastructure, and its importance to productivity and the quality of life. However, the PC concluded that determining the level of infrastructure that most enhances welfare is a complex task and:

It is likely to be best approached by rigorous analysis of individual projects, rather than seeking to surmount an estimated deficit.¹³

4.13 When asked, Ms Terrill indicated that various groups have estimated very large infrastructure deficits.¹⁴ However, she emphasised that any estimation will depend on what is defined as infrastructure. Ms Terrill went on to say that she did not think there is an objective figure that can be used:

I think there is not an objective gap, but in a wealthy society you want great connections. It is one of the many great things that you want in a wealthy society, and it competes with those other things, rather than there being an external benchmark that you can point to. In the absence of service levels, if there were a commitment to particular service levels then you would be

9 Infrastructure Australia, *Australian Infrastructure Audit: Our Infrastructure Challenges Report – Volume 1* (April 2015), p. 7.

10 Productivity Commission, *Public Infrastructure*, Inquiry Report No. 71 (2014), Volume 1, p. 65. See Ms Terrill who spoke about the strong sense in the community that major cities are suffering significant congestion, *Committee Hansard*, 5 November 2015, p. 5.

11 Infrastructure Partnerships Australia, *Partnerships 2010 Infrastructure & Investment Conference Report* (2010), p. 2.

12 Productivity Commission, *Public Infrastructure*, Inquiry Report No. 71 (2014), Volume 1, p. 2.

13 Productivity Commission, *Public Infrastructure*, Inquiry Report No. 71 (2014), Volume 1, p. 66.

14 *Committee Hansard*, 5 November 2015, p. 2.

able to quantify a gap, but otherwise you are kind of picking the goal and then picking the difference.¹⁵

4.14 This sentiment was echoed by Mr Brenton West, Chief Executive Officer, Southern Tasmanian Councils Authority:

Infrastructure is a little bit like a piece of string, though. If you said you had \$15 billion, I could find you \$15 billion of projects that these councils support. If you said you had \$1 billion, I could find that.¹⁶

4.15 Mr Eslake also questioned the ability to 'establish *a priori* how much infrastructure spending Australia needs':

...it is important to remember that one of the purposes of having governments undertake this kind of spending is the economic stabilisation objective. That is to say: you do not determine how much government should spend independently of how much spare capacity there is in the economy to absorb that additional spending without putting upward pressure on inflation and interest rates.¹⁷

4.16 IA suggested 'the existence and scale of any infrastructure shortfall or gap'¹⁸ is the function of choice rather than an objective fact:

Ultimately, we get the infrastructure (and therefore the level of service) that we are prepared to pay for, either through taxes and/or user charges.¹⁹

Maintenance

4.17 The committee heard evidence suggesting a shortfall in the maintenance of existing infrastructure. Ms Terrill highlighted inadequate maintenance as an issue:

...Australia could get better value from public infrastructure through a more systematic approach to maintenance. Infrastructure Australia's recent Audit found under-investment in the maintenance of local roads, particularly in regional and remote areas, where there are large networks to be maintained and councils have limited or declining income bases. There is also inadequate maintenance of regional rail infrastructure carrying low volumes of gain and/or general freight, especially those with ageing timber bridges and timber sleepers. International comparisons suggest that Australia under-spends on maintenance of transport infrastructure...Australia's low ranking for maintenance spending contrasts with our very high spending on transport infrastructure...²⁰

15 *Committee Hansard*, 5 November 2015, p. 2. See also Ms Marion Terrill, *Roads to riches, Better transport investment*, Grattan Institute, April 2016, pp 6-7.

16 *Committee Hansard*, 6 November 2015, p. 12.

17 *Committee Hansard*, 14 August 2015, p. 4.

18 Infrastructure Australia, *Australian Infrastructure Audit: Our Infrastructure Challenges Report – Volume 1* (April 2015), p. 51.

19 Infrastructure Australia, *Australian Infrastructure Audit: Our Infrastructure Challenges Report – Volume 1* (April 2015), p. 51.

20 *Submission 65*, p. 7.

4.18 Mr Philip Davies, Chief Executive Officer, IA told the committee that:

One of the things that was identified in our audit—and we talked about it more in the plan—is a maintenance deficit. When we talk about planning, one of our areas of recommendation is around taking a more holistic view of our infrastructure, both whole-of-asset life—focusing on not just the capital investment but ongoing maintenance and ultimately renewal—and more broadly looking at how that solution fits within a system and network and how it can deliver broader outcomes for the community.²¹

4.19 In a more recent report, Ms Terrill highlighted that the need for new transport infrastructure will depend on how well exiting infrastructure is maintained and used:

One way to get more value from existing infrastructure is through a more systematic approach to maintenance. The operational costs of maintaining long-lived assets can be many times greater than the planning and building cost. Even though Australia's investment level is the highest of OECD countries, maintenance levels are among the lowest...Australia spent only 15 per cent of transport infrastructure funds on maintenance in 2013 compared to 25 per cent a decade ago. Infrastructure Australia recently concluded that sections of the infrastructure base are 'already in poor or declining condition'.²²

4.20 IA commissioned GHD to evaluate the maintenance of existing infrastructure. GHD concluded that:

All sectors present maintenance issues and challenges that will need to be addressed. However, maintenance issues are most pressing in the transport sector and in areas of the water sector.

As a broad observation, assets owned by local government present greater maintenance challenges than those owned by state and territory governments (or their trading enterprises).

Data on infrastructure maintenance and analysis of that data is surprisingly limited. It is not consistently held and reported across the country.²³

Local Government

4.21 The Western Australian Local Government Association (WALGA) suggested that, as a result of increased infrastructure responsibility, there was a disjoint between the expected level of service and the capacity to pay, with the effects including:

...the need to defer asset renewal and staff recruitment; difficulty in meeting co-contributions for committed infrastructure projects that are cofounded by other levels of Government; cuts to maintenance expenditure,

21 *Proof Committee Hansard*, 1 March 2016, p. 3.

22 See also Ms Marion Terrill, *Roads to riches, Better transport investment*, Grattan Institute, April 2016, p. 8.

23 GHD, *Infrastructure Maintenance: A report for Infrastructure Australia* (March 2015), p. iii.

ultimately reducing the useful life of assets; and larger rate increases that those anticipated in Councils' Long Term Financial Plans.²⁴

4.22 Mr Raymond Tame, Chief Executive Officer, City of Armadale, indicated that local councils have the responsibility for recreational and social facilities for communities. Currently the cost of providing these facilities is beyond the finances accumulated by most local councils:²⁵

...in, say, Swan or down in Mandurah, you are talking \$40 million capital costs and then million dollars at least per annum in running and operating them. That is a challenge with that three per cent share of the taxation system. The current taxation system is not providing a vehicle either to secure the land for that sort of activity or providing the infrastructure.²⁶

4.23 Mr Tame stressed that local governments were struggling to maintain, build and sustain infrastructure projects. Local governments felt that they had a disproportionate burden, as:

... Local government capability is three per cent of the taxation base but we are looking after 36 per cent of the infrastructure...²⁷

Grants indexation freeze

4.24 The 2014-15 Federal Budget decision to freeze funding indexation until 2016-17 has been an issue for local government. Mr Brenton West, Chief Executive Officer, Southern Tasmanian Councils Authority, outlined that Financial Assistance Grants:

...are really important to local councils to invest in local community projects and local community infrastructure... [T]o have them frozen is a challenge to councils. It is not just hoping they will be unfrozen in, I think, three years from 2014, it is that they are suddenly three years behind.²⁸

4.25 Mayor Kristie Johnston, appearing in a private capacity, was also troubled by the freeze as it limit's governments ability to deliver community services. Mayor Johnston also highlighted the long-term impact:

It does make it very hard for us to budget as well when we are looking at 10-year financial plans and we have a freeze for a certain period of time. That makes it very difficult for us to plan financially to be sustainable.²⁹

4.26 The WALGA in its submission re-iterated the challenges of the gradual diminution of grant support.³⁰ WALGA added that the freeze impacted on the ability to provide public infrastructure:

24 *Submission 72*, p. 13.

25 *Committee Hansard*, 9 October 2015, p. 3.

26 *Committee Hansard*, 9 October 2015, p. 3.

27 *Committee Hansard*, 9 October 2015, p. 2.

28 *Committee Hansard*, 6 November 2015, p. 20.

29 *Committee Hansard*, 6 November 2015, p. 7.

30 Western Australian Local Government Association, *Submission 72*, p. 4.

A number of Local Governments in Metropolitan Perth have a high fiscal capacity and may be able to pass the impact of the indexation freeze onto ratepayers. However, this is not the case for the majority of WA's Local Governments where fiscal capacity is often low due to lower population density and greater demands on infrastructure provision and maintenance.³¹

Rates caps

4.27 The committee understands that many local governments have previously been, or still are, subject to a rates cap. As noted in previous chapters, the revenue shortfall this has created has further limited council's capacity to fund public infrastructure and to address asset-maintenance backlogs.³²

4.28 Standard and Poor's Ratings Services informed the committee that the current rate caps in New South Wales (NSW) and previous caps in Victoria resulted in 'significant infrastructure backlogs, deteriorating asset quality and lower levels of service'.³³ For example:

In 2013, the New South Wales Treasury Corp. reported that two-thirds of its 152 councils were running operating deficits, deteriorating the sector's financial sustainability. It also estimated an asset-maintenance backlog of A\$1.6 billion over the past four years had emerged.³⁴

4.29 In response NSW Treasury Corp. made a number of recommendations to address this, including:

...having rate increases that meet underlying council costs, prioritising asset-management planning, and increasing the use of debt. It suggested that several councils should use debt as an efficient means of addressing infrastructure backlogs, enhancing intergenerational equity, and improving asset quality and services.³⁵

4.30 Standard and Poor's also advised that in Victoria, the Auditor General estimated that:

...the local councils' infrastructure maintenance backlog was A\$225 million in 2012 and is growing. This could be partly because of previously imposed rate caps. In 1995, Victorian councils were forced to reduce rates by 20%, with future rises limited to inflation minus 1% to drive efficiencies, and reduce duplication and wastage. The state government claimed savings of about A\$400 million over 18 months; however, this figure was disputed, especially when considering the reduction in services and the maintenance costs of aging infrastructure.³⁶

31 *Submission 72*, p. 13.

32 *Submission 63*, p. 7.

33 *Submission 63*, p. 7.

34 *Submission 63*, p. 7.

35 *Submission 63*, p. 7.

36 *Submission 63*, p. 7.

4.31 In response the state government 'subsequently abolished these caps following the emergence of severe infrastructure maintenance backlogs, particularly in regional Victoria'.³⁷

4.32 WALGA submitted that rate caps are a key risk:

The possibility of restrictions on rate revenue, such as rate capping, and unanticipated increases in State Government imposed costs for Local Governments represent key financial risks for Local Government.³⁸

Future levels of spending

4.33 Given continued stagnation in the global economy and ongoing volatility in global markets, investment in public infrastructure has received renewed attention in recent years, both internationally and domestically.

4.34 Mr Eslake noted that the International Monetary Fund (IMF) made the economic case for investment in public infrastructure in October 2014:

For economies with clearly identified infrastructure needs and efficient public investment processes and where there is economic slack and monetary accommodation, there is a strong case for increasing public infrastructure investment. Moreover, evidence from advanced economies suggests that an increase in public investment that is debt financed could have larger output effects than one that is budget neutral...³⁹

4.35 The IMF stated that the potential infrastructure investment gains are shaped by a number of factors, namely:

- *The degree of economic slack.* The short-term boost to output is substantially larger when public investment is undertaken during periods of economic slack and monetary policy accommodation, with the latter limiting the increase in interest rates in response to the rise in investment.
- *The efficiency of public investment.* The output effects are also bigger in countries with a high degree of public investment efficiency, where additional public investment spending is not wasted and is allocated to projects with high rates of return.
- *How it is financed.* In addition, evidence from advanced economies suggests public investment that is financed by issuing debt has larger output effects than when it is financed by raising taxes or cutting other spending.⁴⁰

4.36 However, in recommending greater investment in infrastructure by countries such as Australia, the IMF cautioned that this should not:

37 *Submission 63*, p. 7.

38 *Submission 72*, p. 17.

39 *Committee Hansard*, 14 August 2015, p. 1.

40 Abdul Abiad, David Furceri, and Petia Topalova, World Economic Outlook: 'The time is right for an Infrastructure Push' (30 September 2014); Chapter 3 of the full IMF report, *Is it time for an infrastructure push? The Macroeconomic effects of public investment* in IMF, *World Economic Outlook 2014* (October 2014), pp 75-107.

...be interpreted as a blanket recommendation for a debt-financed public investment increase in all advanced economies, as adverse market reactions— which might occur in some countries with already-high debt-to-GDP ratios or where returns to infrastructure investment are uncertain— could raise financing costs and further increase debt pressure.⁴¹

4.37 The Organisation for Economic Co-operation and Development's (OECD) *2015 World Economic Outlook* also suggested that Australian governments prioritise infrastructure projects to help productivity performance and sustainable growth, while noting the government's expedited programs to improve roads networks, and infrastructure financing incentives such as the Asset Recycling Scheme.⁴²

4.38 In June 2015, the Reserve Bank Governor, Mr Glenn Stevens, observed that 'infrastructure has a role to play in sustaining growth and also in generating confidence'.⁴³ Mr Stevens explained:

...it would be confidence-enhancing if there was an agreed story about a long-term pipeline of infrastructure projects, surrounded by appropriate governance on project selection, risk-sharing between public and private sectors at varying stages of production and ownership, and appropriate pricing for use of the finished product.⁴⁴

4.39 Mr Stevens detailed the benefits of such an approach:

The suppliers would feel it was worth their while to improve their offering if projects were not just one-offs. The financial sector would be attracted to the opportunities for financing and asset ownership. The real economy would benefit from the steady pipeline of construction work – as opposed to a boom and bust. It would also benefit from confidence about improved efficiency of logistics over time resulting from the better infrastructure...⁴⁵

4.40 Mr Eslake's views indicated that public funding of infrastructure had significant support among many economists, as it plays an essential role in lifting productivity across the economy:

...mainstream opinion among economists has become more supportive of the idea that public infrastructure spending can have beneficial effects, both in the short term in ameliorating protracted weakness in household or business spending—especially in circumstances where the efficacy of monetary policy to that end has become limited—and over longer periods

41 IMF, *World Economic Outlook: Legacies, Clouds, Uncertainties*, October 2014, p. 77.

42 OECD, *World Economic Outlook 2015*, pp. 139-140.

43 Mr Glenn Stevens, Address to the Economic Society of Australia Luncheon, Brisbane, 10 June 2015.

44 Mr Glenn Stevens, Address to the Economic Society of Australia Luncheon, Brisbane, 10 June 2015.

45 Mr Glenn Stevens, Address to the Economic Society of Australia Luncheon, Brisbane, 10 June 2015.

as a result of the contribution that well-chosen infrastructure projects can make to enhancing productivity growth.⁴⁶

4.41 Mr Eslake, noted that government spending on infrastructure can play a useful role in economic management by offsetting the effects of large swings in private investment. However, he explained that using public infrastructure investment in this way fell out of favour towards the end of the 20th century, partly for ideological reasons but also because governments found it difficult to get the timing right:

...Governments have often found it difficult to ensure that public infrastructure spending does actually ameliorate the business cycle rather than exaggerate it—or, as economists would say, operates in a countercyclical rather than a procyclical fashion. That was particularly apparent during and after the recession of the early 90s when the infrastructure spending programs launched by the Keating government, under the heading of 'One Nation', did not begin to roll out until after the recession was over. Instead, by coinciding with the subsequent upswing in private sector spending, it had the unintended effect of adding to upward pressure on interest rates.⁴⁷

46 *Committee Hansard*, 14 August 2015, p. 1.

47 *Committee Hansard*, 14 August 2015, p. 1.

Chapter 5

Infrastructure funding

5.1 This chapter discusses the diversification of funding sources available; and the two principal sources of funding particular to infrastructure: land-based taxation and user pays mechanisms.

Diversification

5.2 Infrastructure Australia's (IA) 2016 Infrastructure Plan, recognised that Australia's immediate and longer term infrastructure shortfall will require the use of a diversity of funding sources:

The scale of the funding required will be beyond one tier of government and beyond the revenue-generating capacity of existing user charging structures. Accordingly, we must diversify the pool of funding available for public infrastructure investment.¹

5.3 Mr Adrian Dwyer, Executive Director, Policy and Research, IA, emphasised the need to consider a multitude of funding sources for infrastructure:

It is the diversity of potential revenue streams...but some of the realities we discussed earlier around the level of funding required to meet the challenges means that we have to exploit all of the available funding opportunities for infrastructure.²

5.4 Professor John Hewson, agreed that the infrastructure requirements of the economy are significant and:

They are very difficult to fund, given the current and prospective budgetary circumstances. So, I think we need to start to think outside the square as to how we might actually fund what is going to be a very significant infrastructure requirement over the next several decades.³

5.5 However, Professor Phillip O'Neill, Director, Centre for Western Sydney, University of Sydney, stated that there are only two primary sources of funding but that these are often combined:

To pay the cost of capital it needs to be funded from some source. Crudely, we fund either from taxation, or user pays. I am not sure that I could nominate any exceptions to those two sources. We live in a world now where infrastructure provision is a hybrid sector. Governments are involved around the world at all levels and so is the private sector.⁴

1 Infrastructure Australia, *Australian Infrastructure Plan – Priorities and reforms for our nation's future* (2016) – Report, p. 90.

2 *Proof Committee Hansard*, 1 March 2016, p. 9.

3 *Committee Hansard*, 14 August 2015, p. 25.

4 *Committee Hansard*, 14 August 2015, p. 9.

5.6 Dr Robert Bianchi, Associate Professor of Finance at Griffith University, also drew out this contrast and summarised the suitability of either taxation and user pays to fund infrastructure depending on the nature of the project:

(i) funding source from government in the form of availability payments to the infrastructure project. This funding mechanism is employed when there is no capacity to charge or measure the use of the infrastructure investment. This type of funding mechanism can be used to maintain the long-term investment in government initiatives including government owned state schools, hospitals, and court houses, etc.

(ii) funding source determined by market based mechanisms (i.e. a user pay system such as tolls, levies or taxes). Examples include toll roads and university student accommodation. Under this structure, demand risk is clear and present in the funding cash flows which ultimately determines the value of the debt and equity finance that underpins the infrastructure project.⁵

Broad based-taxation

5.7 Consideration of the structure and level of Commonwealth taxation is beyond the scope of this inquiry. As such, detailed consideration of taxation has been restricted to value capture—land based taxation—measures.

5.8 However, the federal government is assumed to provide the bulk of the balance of funding not provided directly for an infrastructure project from value capture or user pays mechanisms.

5.9 Funding is provided by the Commonwealth to state and local government through specific purpose payments (SPPs).⁶ SPPs are grants made by the Commonwealth to states and territories for key service delivery purposes. The grants place conditions on spending.⁷

5.10 Many infrastructure grants are tied to National Partnership Agreements (NPAs). NPAs are agreements between the Commonwealth and jurisdictions that define mutually shared goals to ensure all participants are committed to the same policy development, implementation and assessment frameworks. NPAs often contain funding agreements between the Commonwealth and states and territories for particular projects.⁸

5 *Submission 66*, pp 12-13.

6 Richard Webb, *The Commonwealth Government's Role in Infrastructure Provision*, Parliamentary Library Research Paper no. 8, 2003-04 (2004).

7 Infrastructure NPAs can be found on the Council on Federal Financial Relations website www.federalfinancialrelations.gov.au/content/npa/infrastructure.aspx (accessed 8 September 2015).

8 COAG, *The Federal Financial Relations Framework* at www.coag.gov.au/the_federal_financial_relations_framework (accessed 8 September 2015).

Asset recycling

5.11 The Asset Recycling Initiative was approved by the Commonwealth and all states and territories on 2 May 2014,⁹ with \$5 billion available on a first-come-first-served basis.¹⁰ Under the Asset Recycling Initiative, states and territories selling approved assets receive a further 15 per cent of the sale value as a bonus payment from the Commonwealth, on the condition that the money is invested in new infrastructure.¹¹

5.12 Two jurisdictions have benefited from this agreement to date. In early 2015 the ACT government announced it would use the scheme to raise capital for its light rail system from the sale of the betting agency ACTTAB, government buildings and public housing assets.¹² NSW has also taken advantage of the scheme through the privatisation of its leased electricity networks, for a range of infrastructure projects.¹³

5.13 IA's 2016 Infrastructure Plan recommended that asset recycling should continue to fund infrastructure, as:

...asset recycling has offered a catch-up funding mechanism for infrastructure investment, but one that will need to be supported by broader reform to maintain sustainable funding over the longer term.¹⁴

5.14 Ms Jane McGill, Senior Policy Adviser Infrastructure, Industry Super Australia, welcomed Asset Recycling:

We are delighted that the government has introduced the Asset Recycling Initiative, because we have actually managed to get some assets into the marketplace, and that creates opportunities for the funds...¹⁵

5.15 However, Mr Craig Michaels, Sovereign Ratings, Standard & Poor's Ratings, explained that Asset Recycling 'is really just swapping one commercially-viable asset

9 Through the National Partnership Agreement on Asset Recycling. See COAG, National Partnership Agreement on Asset Recycling (2 May 2014) at [www.coag.gov.au/sites/default/files/Signed%20National%20Partnership%20\(without%20Att%20A\).pdf](http://www.coag.gov.au/sites/default/files/Signed%20National%20Partnership%20(without%20Att%20A).pdf) (accessed 15 September 2015).

10 The Hon Joe Hockey MP, '\$2billion Asset Recycling deal to rebuild NSW', *Media release*, 8 March 2015.

11 'Infrastructure Growth Package - Asset Recycling Fund' in *Commonwealth Budget 2014-15, Budget Measures: Budget Papers No. 2*, p. 114.

12 Tom McIlroy, 'Asset sales reap \$60 million from Abbott government for Canberra light rail' in *Canberra Times*, 19 February 2015 at www.canberratimes.com.au/act-news/asset-sales-reap-60-million-from-abbott-government-for-canberra-light-rail-20150219-13j3hg.html (accessed 8 September 2015).

13 NSW Government, 'Rebuilding NSW' at www.nsw.gov.au/rebuilding (accessed 8 September 2015).

14 Infrastructure Australia, *Australian Infrastructure Plan – Priorities and reforms for our nation's future* (2016) – Report, p. 90.

15 *Committee Hansard*, 5 November 2015, p. 7.

for another one'.¹⁶ Mr Michaels went on describe the implications of the choice for government about where to spend the proceeds of Asset Recycling:

They are changing their position but are they making them work by still providing flexibility down the track or are they spending the money on services or paying down debt? Paying down debt does not necessarily restrict their flexibility but if they are spending it on services then obviously that would.¹⁷

Value capture

5.16 Value capture refers to an array of measures that raise funds by taxing private beneficiaries—landowners—who are impacted upon by their proximity or access to infrastructure.

5.17 A number of witnesses argued for some form of value capture to be included in the mix of options to fund public infrastructure.¹⁸

5.18 Mr Martin Locke appearing in a private capacity, suggested that value capture had the capacity to be another funding source of public infrastructure:

Value capture can actually be perceived as being a potential third source to augment what is paid by users or what is provided by government through taxation. Value capture is really trying to say if there is an uplift in value to other third parties by putting in place an infrastructure project, why don't we try to put in place some structures to try to capture some of that value that they otherwise receive as a windfall gain and try to reinvest that back into the original infrastructure investment.¹⁹

5.19 Mr John Lawrence proposed making value capture a condition of government infrastructure investment:

Capturing some of the increased value that flows from infrastructure spending should be a condition if the federal government borrows to fund infrastructure spending by the states. The system of value capture needs to be coordinated across the three levels of government. Big infrastructure projects could be financed by the federal government and the rest should come from value capture at the state and local government level.²⁰

5.20 Mr Karl Fitzgerald, Project Director from Prosper Australia, provided historical examples of the use of value capture for specific infrastructure projects in Australia:

Going back 100-odd years, the formation of Canberra was based on a wider version of value capture with their leasehold model. Every 20 years the land

16 *Committee Hansard*, 5 November 2015, p. 20.

17 *Committee Hansard*, 5 November 2015, p. 20.

18 See for example: *Committee Hansard*, 9 October 2015, p. 4, p. 19, p. 27; *Committee Hansard*, 6 November 2015, p. 37.

19 *Committee Hansard*, 14 August 2015, p. 34.

20 *Proof Committee Hansard*, 14 April 2016, p. 14.

was revalued and that lease payment that went under the freehold system to government helped to finance infrastructure. It is not well-known enough, but about 30 per cent of the Sydney Harbour Bridge was financed using value capture from the incredible uplift in land values for those on the North Shore.

... in Melbourne there was the Melbourne City Loop. The first City Loop tunnel had a 25 per cent value-capture-type funding arrangement via the council rates surrounding Flagstaff Gardens there.²¹

5.21 Mr Fitzgerald also pointed to overseas examples where value capture has played an important role in accelerating the rate of infrastructure provision:

We have seen and noted historical examples in Hong Kong and Japan, through to recent examples in London, with the London Crossrail tunnel, and through Washington, with their Rhode Island extension. And there is New York, their No. 7 train line extension.²²

5.22 The recently released Infrastructure Plan from IA supported the use value capture and recommended that 'Governments should routinely consider value capture opportunities in all future public infrastructure'.²³ Mr Dwyer outlined the need to consider projects and funding simultaneously:

We have said that one approach to value capture would be to require the projects seeking Commonwealth investment to have demonstrated a consideration of value capture [and] if not, why not approach to the implementation of value capture. That is a project conditionality lever that the Commonwealth could use to ensure that there has been fair consideration of a multitude of funding sources for infrastructure.²⁴

5.23 Dr Joseph Drew, Research Fellow, Centre for Local Government, University of New England explained value capture as matter of cost allocation:

...we also need to make sure that the people who are benefiting from development are bearing some of the costs associated with the development. We also need to make sure that if there is a private benefit associated with some sort of infrastructure then the people that get that benefit pay a little bit extra.²⁵

Land tax

5.24 The simplest form of value capture is a tax on the unimproved value of land. This is known variably as a 'land tax', 'site value fee' or 'betterment levy'.

21 *Committee Hansard*, 5 November 2015, p. 42.

22 *Committee Hansard*, 5 November 2015, p. 42. Other examples are included in Infrastructure Australia, Infrastructure Plan, February 2016, p. 94.

23 Infrastructure Australia, Infrastructure Plan, February 2016, p. 94.

24 *Proof Committee Hansard*, 1 March 2016, p. 9.

25 *Committee Hansard*, 14 August 2015, p. 22.

5.25 The Productivity Commission (PC) Report noted that '...the underlying logic of betterment levies is that the benefits from local infrastructure are reflected in higher property values and business activity' and that 'it provides a means of readily capturing part of those benefits to fund infrastructure.'²⁶

5.26 Dr James McIntosh, Director of LUTI Consulting used an economic model of Sydney to show the committee that infrastructure investment over time lift land values in the surrounding markets:

It is a threefold, basically. You get, what is called, the monetisation of accessibility. So as people have access to the infrastructure, they say: 'It's going to save time; therefore, I will raise my willingness to pay for proximity and I will pay a bit more to live there.' They may rent an apartment that is normally \$700 a week, but if it is near a train station, they will say, 'It's probably going to save me a hundred dollars a week in the cost of a car, so I will pay \$800 a week.'²⁷

5.27 The Australian Government's 2015 Tax Discussion Paper provided results of Treasury modelling showing that land tax was the most economically efficient of the five major Australian taxes modelled; and that stamp duty on property transfer was the most inefficient.²⁸

5.28 Betterment levies have been used around the world:

There is a long history of betterment levies being used to fund infrastructure in Australia...They have also been used overseas, such as in Denmark, Japan, Spain and the United Kingdom...²⁹

5.29 Mr Locke informed the committee that more recently a betterment tax had been used to co-finance the Gold Coast light rail project:

Another option is what is called a betterment levy, and a betterment levy is exactly what was done on the Gold Coast. You agree with local government how a rate levy can be imposed on rate users [from rate payers or local businesses] to fund the piece of infrastructure....³⁰

5.30 Prosper Australia's submission detailed that land taxes could either be broad based 'with the market valuation acting as a proximity vote to effective infrastructure'; or 'limited to a set geographical region surrounding a new infrastructure assessment district.'³¹

5.31 Prosper Australia raised issues of politicisation and equity in establishing boundaries for geographically limited land taxes:

26 Productivity Commission, (2014), *Public Infrastructure*, Inquiry Report No. 71, p. 163.

27 *Committee Hansard*, 6 November 2015, p. 36.

28 Australian Government, *Re: think: Tax discussion paper* (March 2015), p. 25.

29 Productivity Commission, *Public Infrastructure*, Inquiry Report No. 71 (2014), p. 163.

30 *Committee Hansard*, 14 August 2015, p. 38.

31 *Submission 67*, p. 3.

The political machinations are also complicated with assessment districts, with controversy centring on the last property inside the VC assessment district and the property just outside it. One can expect those outside the district to enjoy a free ride on those taxpayers contributing to the project. Additional factors supporting a wider VC net include those property owners commuting to and from work through the region. Their property values will also increase, but at a lesser rate.³²

5.32 The PC concluded that:

...betterment levies may be appropriate when infrastructure has diffuse benefits on land values, and these are substantial and quantifiable. However, there are a number of practical challenges in setting such levies. Moreover, experience with betterment levies being removed prematurely raises doubts about whether they can be a genuine funding source over an extended period. Nevertheless, betterment levies should be considered as a potential funding source when a project has a sizeable group of beneficiaries beyond users.³³

Tax increment financing

5.33 Tax increment financing (TIF) is another value capture mechanism. The PC report explained that TIF:

...uses the expected increase in property tax revenue as security to finance the infrastructure. This involves hypothecating a portion of future revenue from property taxes to underwrite loans and/or bonds that finance a project. The hypothecation usually ends after a fixed period, such as 25 years.³⁴

5.34 Further, Mr Locke explained that TIF is a concept whereby you simply say:

'If we build a piece of infrastructure, it is going to create value, and coming out of that value there are going to be higher tax streams that are going to flow from that development, whether those taxes are land taxes, income taxes, capital gains et cetera.' The concept in the United States is to designate a tax increment financing district to try to ring fence it, and then to ring fence the incremental tax revenues that arise as a result of that infrastructure development. On the back of those forecast revenue streams, the TIF district raises a bond up front with support from government, and the source of repayment of that bond is this stream of incremental tax revenue.³⁵

5.35 Professor Peter Newman, Professor of Sustainability, from the Sustainability Policy Institute, Curtin University, told the committee that many states in the US have

32 *Submission 67*, pp. 3-4.

33 Productivity Commission, *Public Infrastructure, Inquiry Report No. 71* (2014), Volume 1, p. 165.

34 Productivity Commission, *Public Infrastructure, Inquiry Report No. 71* (2014), Volume 1 p 165.

35 *Committee Hansard*, 14 August 2015, p. 38.

used TIF to fund public infrastructure. Portland has built its light rail using various financing mechanisms including TIF:

One part of it—the most recent part—is a privately funded light rail that goes to the Pearl District. The Pearl District was a run-down area that needed regenerating. All the developers realised that they would not be able to get anything like the return they would like to enable that redevelopment unless they had light rail. So they pooled together and the local council was able to put a governance structure around it and created this opportunity. It has been incredibly successful.³⁶

5.36 Mr Lino Iacomella, Executive Director of the Property Council of Australia (WA), similarly expressed support for TIF as well as infrastructure bonds:

...we would like to say that the Property Council of course support alternative infrastructure funding mechanisms – particularly the introduction of infrastructure bonds and what we know of as tax or incremental financing as two examples of that.³⁷

5.37 The Planning and Transport Research Centre (PATREC) acknowledged the uncertainty of future property taxes. Nevertheless PATREC argued that TIF and land use planning should be used in combination with other mechanisms:

A transport project will always affect nearby property values. However, the final impact on property values is in part a result of the land use planning for the surrounding areas. For example, around rail stations planning can encourage higher residential and commercial densities. Along the MAX light rail route there was planning for higher residential, commercial and retail densities. These planning changes affect property prices and consequential tax revenues. On this basis, tax increment funding should realistically be in all financing plans for major infrastructure investments supported by land use planning.³⁸

5.38 Local government suggested that TIF is well suited to regional capitals and should be considered. Mr Sean Cameron, Manager Economic Development, City of Ballarat, explained that TIF is against a projection of population growth which can be accurately forecasted.

We have been just over that two per cent for quite a while now. We know that we have got the planning approval in place where we can maintain it for the next 15 to 20 years. So if we are able to borrow against that future rate or income, we are spending current residents' dollars on infrastructure for future residents—

...

36 *Committee Hansard*, 9 October 2015, p. 14.

37 *Committee Hansard*, 9 October 2015, p. 36.

38 Planning and Transport Research Centre (2014), *Review of Infrastructure Financing Options for Transport in Western Australia*, pp. 55-56.

and there is a risk in that because we are doing that in the future and we might not get the growth and things like that. If a council has not got that planning correct, that is where the risk is and that is where we need to be careful about it.³⁹

5.39 The PC took a cautious view of using TIF, as:

...[a]mong other things, it requires full consideration of the risks involved in underwriting debt with an uncertain increase in future property taxes.⁴⁰

5.40 These concerns were echoed by Dr Paul McLeod, Research Program Leader, PATREC, University of Western Australia, when he emphasised that government needs to consider risk when implementing value capture:

Consider a project like a light rail project. If you are going to have value capture, you can do it in one of two ways: you can allow the natural increase in land values and property values to feed through the property tax system to become a ring-fenced funding mechanism for the project, or you can do what many people talk about, which is promoting higher densities along the route—promoting more residential development and more commercial development. One of the things that often happen is that people talk about that as if it will happen and it is guaranteed to happen, but there is some risk that it will not happen. So, if we are going to do value capture, I think we ought to put it in the same risk management framework as everything else.⁴¹

5.41 Using the Mirrabooka light rail project in Perth as an example, Dr McLeod articulated that with proper planning you would expect more people to live along the route, and higher residential densities.

You might expect more people to locate businesses along the route, and that would generate value capture, and you could contemplate contributing some of that to the project. But if Planning then says, 'At Innaloo, not too far away, we're going to allow—because a proponent wishes to do so—a very large number of additional apartments, a very large number of additional shops,' that becomes competitive. In the short run, the one may compete with the other and slow down the process of value capture, which is a risk.⁴²

Local government rates

5.42 Council rates are form of property tax and make up half of local governments' revenue.⁴³ However, Australian local governments use a mix of valuation methods to rate properties, with methods varying within and between states.⁴⁴

39 *Committee Hansard*, 5 November 2015, p. 33.

40 Productivity Commission, *Public Infrastructure, Inquiry Report No. 71 (2014)*, p. 166-167.

41 *Committee Hansard*, 9 October 2015, p. 28.

42 *Committee Hansard*, 9 October 2015, p. 28.

43 See: <http://knowyourcouncil.vic.gov.au/guide-to-councils/finance-and-planning/rates-and-charges> (accessed 17 March 2016).

5.43 A number of councils use a form of improved value of the land that includes the value of development on the land as well as the value of the land itself.⁴⁵ The 2009 Henry Tax Review noted that:

...the efficiency of council rates is likely to be reduced in councils that use improved values to assess the tax, as this discourages capital improvements.⁴⁶

5.44 Mr Fitzgerald explained that capital improved valuation methods can provide perverse incentives because 'if you improve your building you are up for higher rates, and we would really like to see that change.'⁴⁷ Further:

Distortions can impede the value capture process by levying on the building only. Such imperfections lead to a value transfer, rather than a value capture. It is a transfer because the levy is based on the productive building (the bigger, the more they pay) rather than the locational benefits of land.⁴⁸

5.45 Mayor Kirstie Johnston, appearing in a private capacity, informed the committee that local governments experienced difficulty attaching additional levies and raising rates. Areas requiring the highest level of infrastructure development were often the municipalities that have high levels of disadvantage and local government is cognisant of the need to ensure that they are not further disadvantaged.⁴⁹

5.46 Additionally, Mayor Johnston outlined that some local councils did not fund additional infrastructure projects, as they did not perceive that the cost and maintenance of extra infrastructure would be sustainable for ratepayers:

We have cut right back to try to achieve our goals of breaking even by 2016-17 in our investment in infrastructure of our own assets. We are certainly not in a position to invest in the future – medium and short term – in anything else.⁵⁰

5.47 Alderman Sue Hickey, Chair of the Southern Tasmanian Councils Authority, expressed that while the mandate of local governments to provide public infrastructure had increased, the rateable base had not grown sufficiently to fund infrastructure:

There is more and more pressure on local government to do more and more things. We are in health space in the capital city. We are in youth space. We

44 Australian Government, *Australia's future tax system: Report to the Treasurer – Part Two: Detailed analysis*, (December 2009), p. 258.

45 Australian Government, *Australia's future tax system: Report to the Treasurer – Part Two: Detailed analysis*, (December 2009), P. 258

46 Australian Government, *Australia's future tax system: Report to the Treasurer – Part Two: Detailed analysis*, (December 2009), P. 258

47 *Committee Hansard*, 5 November 2015, p. 45.

48 *Submission 67*, p. 3.

49 *Committee Hansard*, 6 November 2015, p. 5.

50 *Committee Hansard*, 6 November 2015, p. 7-8.

are in homelessness. All of these things that we are inheriting, and there is only so much money you can get from the ratepayer.⁵¹

5.48 Councillor Deirdre Flint OAM, outlined that councils voluntarily freeze revenue in times of hardship. This adds another layer of difficulty raising infrastructure funding:

I would emphasise that our council, back in 2000, decided to freeze the rates because of the drought that we had in Tasmania. It was very severe. They said they would not put up any rates and they were frozen for two years. Our council is still suffering from that. It should have, at least, gone up with the cost of living. You really do not recover.⁵²

5.49 Miss Catherine Cashmore, President, Prosper Australia spoke about how the current system for ratepayers is not sustainable and that value capture should be used for infrastructure financing:

...because the cost is being reaped back from the land values there tends to be much more efficiency in the benefits that the infrastructure will actually create ahead of time. More so than we see now you make sure that the infrastructure is going to benefit the community best, and you get more community involvement in that and more acceptance from the community about the infrastructure that is going in and that is going to provide them with those benefits if they are going to be paid back out of the value capture in their land values.⁵³

5.50 Mr Michael Foley, Chief Executive Officer, City of Swan, highlighted that outer growth areas have rates that are 30 per cent higher than their inner city counterparts to provide for the growth and new facilities.⁵⁴

User pays

5.51 In its 2016 Infrastructure Plan, IA contended that user pays needs to be better utilised in Australia, as:

We have a fairly low cost recovery from public transport in Australia. It is about 20 to 25 per cent. If you look at our international peers, Auckland has about 44 per cent cost recovery from the user and 56 from the taxpayer. We are more like 20 or 25 per cent from the user and 80 per cent from the taxpayer.⁵⁵

5.52 IA outlined that strong user pays infrastructure tends to have lower maintenance deficits:

What we found is that those infrastructure sectors where there is a higher degree of market maturity tended to display lower incidences of a

51 *Committee Hansard*, 6 November 2015, p. 17.

52 *Committee Hansard*, 6 November 2015, p. 20.

53 *Committee Hansard*, 5 November 2015, p. 43.

54 *Committee Hansard*, 9 October 2015, p. 6.

55 *Committee Hansard*, 1 March 2016, p. 7.

maintenance gap. In those where you have a more mature market structure, so a greater degree of user-pays and a better matching between what users pay and what they consume, you tend to have that lower incidence of maintenance gap.⁵⁶

5.53 Mr Ben Johnston, President of the Hobart Northern Suburbs Rail Action Group outlined that user pays is a funding mechanism to mitigate government expenses as 'no public transport outfit in the world makes a profit'.⁵⁷

Direct user pays

5.54 The PC reported that participants in their inquiry generally supported the consideration of more direct user charging for light vehicles. The Transport Reform Network⁵⁸ argued:

...our fundamental thinking about roads needs to change. Roads are a utility — not unlike water and electricity — and we should charge accordingly ... A more direct, user-pays approach would ensure that all of us pay a fair price for our use of the system...A new approach to road access pricing also creates the opportunity to establish a sustainable revenue source for the funding of transport infrastructure and services.⁵⁹

5.55 The PC concluded:

The Commission considers that, ideally, a unified system of direct road user charging would be developed for all vehicle types, rather than on a piecemeal basis. As noted above, light and heavy vehicles usually share the same infrastructure, and the associated costs — such as for traffic lights — are often common to all vehicles. Timing may be different for the take-up of such an option, both between different classes of road users and by location, but should proceed as a collective development among road users. The ultimate objective remains to use charges to link users with subsequent resource allocation (that is, project selection).⁶⁰

5.56 In its recent Infrastructure Plan, IA supported a user pays approach for road networks:

On road networks, the transition to a more user pays approach would allow charging to be linked to funding and supply to be linked to demand. This will be fundamental to securing the required funding and sustainably improving the level of service.⁶¹

5.57 IA also found the markets where there is a high degree of user pays tend to have lower maintenance deficits. Mr Dwyer stated:

56 *Proof Committee Hansard*, 1 March 2016, p. 8.

57 *Committee Hansard*, 6 November 2015, p. 48.

58 Productivity Commission iniquity, *Submission 54*, pp 5-6.

59 Productivity Commission, *Public Infrastructure, Inquiry Report No. 71 (2014)*, p. 153.

60 Productivity Commission, *Public Infrastructure, Inquiry Report No. 71 (2014)*, p. 154.

61 Infrastructure Australia, *Infrastructure Plan*, February 2016, p. 9.

What we found is that those infrastructure sectors where there is a higher degree of market maturity tended to display lower incidences of a maintenance gap. In those where you have a more mature market structure, so a greater degree of user-pays and a better matching between what users pay and what they consume, you tend to have that lower incidence of maintenance gap. Where there is a poorer connection you have a higher incidence of maintenance. For instance, regional potable water is an area where there are clear maintenance deficiencies in some circumstances. That is a market where there are less mature market structures as opposed to something like mobile telecommunications where there is a high degree of market maturity and where we do not see any exhibits of maintenance.⁶²

5.58 Mr Anthony Schinck, Chief Executive Officer of the City of Ballarat, explained that there are constraints on local government's access to user pays funding. Local government relies on rates (a property tax) and federal government assistance:

Our revenues in terms of fee-for-service are often constrained by limitations that are set in statute and where we tend to no longer be active as a tier of government is in mature parts of the economy or services sector where other private providers can act. In fact, only about 25 per cent of our overall revenue is earned from fees, charges, fees for services and fines. The remaining part of our revenue is all generated from rates, which only represents about 50 per cent of our overall revenue, and the remaining portions are from state and federal government forms of funding and investment.⁶³

62 *Proof Committee Hansard*, 1 March 2016, p. 8.

63 *Committee Hansard*, 5 November 2015, p. 27.

Chapter 6

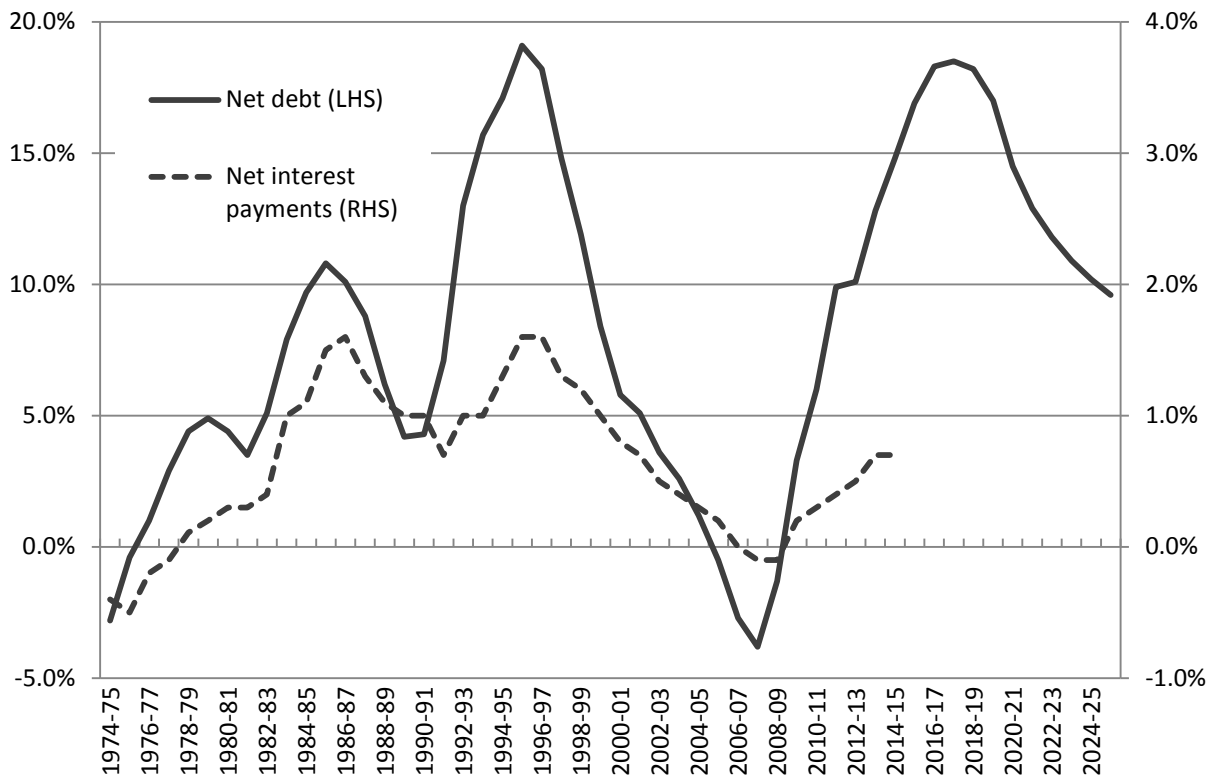
Infrastructure financing

6.1 This chapter covers the options at the federal level to raise money for infrastructure projects. The options covered in this chapter include: government debt; public private partnerships; and how this financing could be managed by the federal government.

Level of government debt

6.2 Figure 6.1 shows past and projected levels of net Commonwealth Government net debt over a fifty year period.

Figure 6.1: Commonwealth general government sector net debt and net interest payments as a percentage of GDP¹



Capacity for additional debt

6.3 Infrastructure Australia's (IA) plan noted that Australia's public debt is, by international standards, relatively low. IA suggested that the government may have borrowing capacity to finance economic infrastructure.

...this is an option that should be explored further. Provided new infrastructure assets are economically-viable, investments could unlock greater productivity across Australia and support current structural shifts to

1 Data derived from Commonwealth Budget Papers and Mid-Year Economic and Fiscal Outlook for 2015-16.

a greater focus on a competitive, service-based economy in the Asia-Pacific region.²

6.4 Mr Saul Eslake, Economist, believes that there is currently scope for the government to increase its borrowings to fund productive infrastructure. Mr Eslake referenced a recent statement by the International Monetary Fund (IMF):

For economies with clearly identified infrastructure needs and efficient public investment processes and where there is economic slack and monetary accommodation, there is a strong case for increasing public infrastructure investment. Moreover, evidence from advanced economies suggests that an increase in public investment that is debt financed could have larger output effects than one that is budget neutral...³

6.5 In continuation, Mr Eslake said:

The IMF goes on to emphasise that this conclusion is not 'a blanket recommendation for a debt financed public investment increase in all economies,' but the conditions which would prompt the IMF to counsel caution in particular cases—where debt-to-GDP ratios are already high or where returns to infrastructure investment are uncertain—do not seem to be pertinent in the Australian case.⁴

6.6 Mr Eslake looked to Australia's credit ratings to calculate a figure government could spend, noting that:

Australia's AAA credit rating is safe as long as government debt as a proportion of GDP remains below 30 per cent. There are different ways of measuring it, but, at the moment, public debt, including that of state and territory governments, is expected to peak somewhere around 22 per cent of GDP in a couple of years' time....

...A rough rule of thumb, allowing for the fact that on average during recessions Australia's public debt has increased by about 4½ percentage points of GDP, could be that Commonwealth government borrowing for infrastructure spending could increase by, say, three to 3½ percentage points of GDP without seriously putting at risk the Commonwealth's AAA rating.⁵

6.7 When considering an amount of debt a country can carry, Dr Paul McLeod, Research Program Leader, Planning and Transport Research Centre, University of Western Australia, commented that the question is really 'whether or not the

2 Infrastructure Australia, *Australian Infrastructure Plan – Priorities and reforms for our nation's future* (2016) – Report, p. 92.

3 International Monetary Fund, *World Economic Outlook, October 2014: Legacies, Clouds, Uncertainties*, (30 September 2015), p. 77.

4 *Committee Hansard*, 14 August 2015, p. 2.

5 *Committee Hansard*, 14 August 2015, p. 6.

underlying structure of the economy is such that it could sustain the debt currently and even more debt.⁶

6.8 Professor John Hewson challenged the basis for many concerns about government debt by drawing attention to the conflation of debt to fund the recurrent deficit and debt to fund capital (infrastructure) investment:

I think the way to start is to think in terms of jettisoning the very simplistic notions that have been peddled in parliaments around Australia that all debt is bad. If all debt were bad, none of us would buy a house or build a business. We should draw a distinction between recurrent expenditure and capital infrastructure expenditure in the budget and think about ways in which we can fund infrastructure separately to that.⁷

6.9 Professor, Steve Keen, Economics, History & Politics at Kingston University London, challenged the macroeconomic assumptions underpinning the policy of seeking to maintain a surplus:

Since a government should run a deficit of the order of the rate of growth of the economy in nominal terms, the fact that the government is running a far smaller deficit means that spending on infrastructure and essential welfare is well below what it could sustainably be. This generates waste. It is wasteful to give our children less education than we can afford, to maintain public infrastructure less well than we can afford, and to invest less in research than we can afford.⁸

6.10 IA highlighted that public sector borrowing for infrastructure is potentially more equitable as it distributes infrastructure costs across current and future taxpayers who will benefit from the infrastructure.⁹

Price of debt

6.11 Professor John Freebairn, Ritchie Chair of Economics, University of Melbourne, and Professor Max Cordon, Emeritus Professor of International Economics, Johns Hopkins University highlighted the opportunity provided by the historically low interest rates:

The context of Australia as an established net borrower from a large global capital market, together with current low borrowing rates, further supports a strategy of the use of government debt to fund infrastructure with a transparent and public positive benefit cost assessment. The issue of long term bonds to fund government infrastructure investment can be an important part of a strategy to lock in lower interest rates over the extended life of the productive investments.¹⁰

6 *Committee Hansard*, 9 October 2015, p. 32.

7 *Committee Hansard*, 14 August 2015, p. 25.

8 *Submission 64*, p. 24.

9 Infrastructure Australia, Australian Infrastructure Plan – Priorities and reforms for our nation's future (2016) – Report, p. 93.

10 *Submission 60*, p. 3.

6.12 Ms Marion Terrill, Transport Program Director, Grattan Institute, explained:

It is clear that the opportunity to borrow to build productive infrastructure is very good, with interest rates at historic lows. The 10-year government bond rate is about 2.6 per cent, and the states' 10-year bond rates are not much higher. Because governments can borrow cheaply, more cheaply than companies can, there is a real opportunity for governments to take advantage of such low interest rates, but spending is only worth doing for good projects.¹¹

6.13 One reason for the cautious approach to government debt is its potential to affect the Commonwealth's AAA credit rating.¹² Ms Terrill summed up why a AAA rating is important to government:

The AAA rating is part of what allows you to borrow cheaply, and borrowing cheaply is a very valuable thing for government.¹³

6.14 This was again recognised by Standard and Poor's Ratings Services who identified that the AAA credit rating was a government priority:

Although government budgets have capacity to absorb debt to fund infrastructure, the majority of the Australian governments (at both federal and state levels) have chosen to target 'AAA' credit ratings so that they can ensure strong access to markets, lower costs of debt, and, most importantly, deliver on their electoral promises to remain 'fiscally conservative'.¹⁴

6.15 Ms Fabienne Michaux, Head of Developed Markets Asia-Pacific, Standard & Poor's Rating Services, expressed the view that the Commonwealth does not have much scope to increase borrowings without risking their credit rating:

This is because, even though government debt is fairly low, we believe that the government's fiscal policy credibility increasingly hinges on it broadly achieving its current budget forecasts. This is after a number of years where planned improvements in budget outcomes have been derailed by sharp falls in commodity prices, and the earliest we may now see a Commonwealth budget surplus is 2020.¹⁵

6.16 Mr Craig Michaels, Sovereign Ratings, Standard & Poor's Ratings, re-iterated that although debt is part of the rating considerations, the current focus is on fiscal policy credibility:

...so yes, there is this debt threshold that is part of our framework, but increasingly we are saying it is not enough just to keep debt below 30 per

11 *Committee Hansard*, 5 November 2015, p. 1. See also Ms Marion Terrill, *Roads to riches, Better transport investment*, Grattan Institute, April 2016, p. 9.

12 For an explanation of what a credit rating is and how it is used please see Ms Fabienne Michaux, Head of Developed Markets Asia-Pacific, Standard & Poor's Ratings Services, *Committee Hansard*, 5 November 2015, p. 16.

13 *Committee Hansard*, 5 November 2015, p. 2.

14 *Submission 63*, p. 6.

15 *Committee Hansard*, 5 November 2015, p. 16.

cent, but a key part of the AAA has always been that we have thought governments are very much committed to getting budgets back in the black over a medium-term time frame.¹⁶

6.17 Mr Eslake explained that:

One of the principal reasons for the caution exhibited by successive governments of both political persuasions at both the Commonwealth and state levels regarding the funding through additional debt instruments of higher levels of infrastructure investment is the concern at the risk that this could trigger an adverse reaction from credit rating agencies, leading in turn to a downgrading of the Commonwealth's or a state-sovereign debt rating and thence to higher debt-servicing costs. There is no widely shared consensus among mainstream economists as to how seriously such concerns should be ranked as against other objectives and risks. The capacity to raise debt finance when needed or to refinance maturing debt at advantageous interest rates is not something to be dismissed lightly, yet nor should it, in my opinion, elevate it above all other fiscal and economic policy objectives.¹⁷

6.18 Mr Eslake also said that the Commonwealth has a strong desire to maintain its credit rating as the:

...credit rating underpins the AA rating of the four major Australian banks, which in turn allows them to raise wholesale finance in international capital markets at lower interest rates than would be the case if the Commonwealth's and hence the Australian banks' credit ratings were lower.¹⁸

State government

6.19 Mr Eslake also explained that Commonwealth and state debt are different.

However no such concerns apply to the credit rating of state governments. The only entities whose borrowing costs are affected by state governments' credit ratings are the individual state governments and their wholly-owned business enterprises. And even then the interest rates that state governments' borrowing agencies actually pay on their borrowings are influenced more by conditions in international sovereign debt markets, and by yields on Commonwealth government bonds, than they are by their own credit ratings. Thus, for example, Queensland has been able to borrow in recent years at much lower interest rates since it lost its AAA rating than it could while it had that rating, not because of the lower rating but because of the substantial decline in benchmark bond yields since the onset of the global financial crisis.

16 *Committee Hansard*, 5 November 2015, p. 18.

17 *Committee Hansard*, 14 August 2015, p. 2.

18 *Committee Hansard*, 14 August 2015, p. 2.

6.20 Ms Michaux contradicted this by suggesting that Commonwealth and state government ratings are closely intertwined which limits the scope for states to increase borrowing for infrastructure.¹⁹

6.21 Mr Eslake proposed that state and territory governments could fund infrastructure by borrowing from the Commonwealth. Mr Eslake suggested that the Commonwealth obtains debt and on-lends it to the states and territories at a small margin. If the Commonwealth on-lent to states, under the accounting conventions used in federal budget papers and other government financial reports, the loans made by the Commonwealth would be an offset to the increase in gross debt:

...so there would be no increase in the Commonwealth net debt, nor would there be any increase in the Commonwealth's underlying budget deficit, because the loans to the states would be classified under current accounting conventions as a 'net increase in financial assets for public policy purposes', which falls in the wedge between the underlying budget balance and the headline budget balance—like, for example, the Commonwealth's investments in the national broadcast network company...So there would be no net increase in the Commonwealth budget underlying deficit, there would be no net increase in the Commonwealth net debt and, therefore, no reason to expect the Commonwealth's credit rating would be affected.

The state governments' net debt would increase, and their credit ratings could be adversely affected, depending on the amount by which their borrowings increased. But since the state governments' credit ratings do not affect the borrowing costs of anyone other than themselves, and because the Commonwealth would, in effect, be carrying the additional gross debt issuance, there should not really be any serious consequences for anyone else as a result of that kind of transaction.²⁰

Raising government debt

Infrastructure bonds

6.22 The Productivity Commission (PC) found that in principle, using securitised borrowing via government infrastructure bonds, for an infrastructure fund could have advantages over general purpose borrowing. In particular, to the extent that the interest rate reflects the risks of the project, rather than the risks of default by the borrower. Bonds would make financing transparent and could instil greater discipline on project selection. However:

...if infrastructure bonds are used with the aim of bridging the financing gap otherwise not filled by the market, they would need to incorporate an incentive to investors to provide additional financing. To the extent that bonds are an alternative way of subsidising the project, the price of the bond (and, hence the interest rate) will no longer reflect the risk of the

19 *Committee Hansard* 5 November 2015, p. 16.

20 *Committee Hansard* 14 August 2015, p. 3.

project, and the above advantage of project-specific bond finance disappears.²¹

6.23 Government issued infrastructure bonds may have some positive perception value as the debt is being raised is for the overall public benefit. For example:

...Waratah bonds issued by the NSW Government are being promoted to investors 'who want to secure a better future and invest in their state'...The marketing of government debt as being for the purpose of infrastructure investment may also make it more politically acceptable and assist in overcoming the consequences of public misconceptions about government debt...

Ultimately, if government-issued infrastructure-specific bonds are to facilitate additional investment, they are likely to involve some form of subsidy. This is confirmed by past experience with such bonds in Australia...and is consistent with comments from some participants after the draft report...The subsidy can take various forms including tax advantages...or the underwriting by the government of the project's risks.²²

6.24 Dr McLeod cited examples from the United States (USA) where infrastructure bonds are used widely to fund public infrastructure:

Many US cities issue municipal bonds to fund local infrastructure and do so more or less successfully, according to the inherent economic strength of the city.²³

6.25 Mr Karl Fitzgerald, Project Director, Prosper Australia drew a relationship between the use of infrastructure bonds and value capture. Mr Fitzgerald said that infrastructure bonds were:

...a snazzy word for using the sovereign ability to sell securities and have that sovereign guarantee to repay them, which is underpinned by the value capture process.²⁴

6.26 However many witnesses supported the exploration of infrastructure bonds. Ms Debra Goostrey, Chief Executive Officer, Urban Development Institute of Australia (WA) indicated there would be advantages to this approach:

Remember that at certain times funding for infrastructure and urban development dries up, so by having a bonds approach you can level out the availability of finance. Yes, at various times it might be a little busy in that part of the market, but at other times it will be an essential source of funds.²⁵

21 Productivity Commission, (2014), *Public Infrastructure*, Inquiry Report No. 71, Volume 1, pp 230-231.

22 Productivity Commission, (2014), *Public Infrastructure*, Inquiry Report No. 71, Volume 1, pp 230-231.

23 *Committee Hansard*, 9 October 2015, p. 32.

24 *Committee Hansard*, 5 November 2015, p. 43.

25 *Committee Hansard*, 9 October 2015, p. 23.

6.27 Mr Jeremy Cordina, Chair, Infrastructure Committee, Urban Development Institute of Australia (WA) also saw merit in this approach:

In many ways the finance industry is as cyclical as any other, so if you had another mechanism that fills the gap that would be fantastic.²⁶

6.28 Professor Hewson, suggested that there was scope for the Commonwealth to investigate financing infrastructure through a fund which issued government securitised infrastructure bonds, which could be issued at a low rate of interest.²⁷

6.29 Professor Hewson told the committee that banks, superannuation funds and sovereign wealth funds would welcome infrastructure bonds as they cannot really find a similar funding stream anywhere else:

We do see quite a lot of money flowing from, say, Canadian pension funds into the Australian finance markets, some in shares and some in fixed interest. A lot of central banks want the equivalent of fixed interest, even though it has not been a great investment in terms of the returns they make on it- it is a basic security fixed interest number.²⁸

6.30 The committee heard that a key challenge for infrastructure bonds is the expectations about the rates of return. Ms Goostrey emphasised that this would come down to the level of risk and that lower returns can be useful in a diversified portfolio:

If you invest directly into a development, you are wearing the entire risk of any delays or problems with that project. If you are investing in a diversified pool with returns, particularly with infrastructure, if you have long-term contractual agreements with a government entity or others, that de-risks and therefore the returns do not need to be as high. In a diversified portfolio, they become useful. So it is all about risk. If you can de-risk it through those long-term contracts or other arrangements, it will be a valuable part of people's portfolios.²⁹

6.31 Dr Phillip O'Neill, Director, Centre for Western Sydney, University of Sydney commented that investors committing to an infrastructure project need to get a rate of return competitive with what it can get globally:

So you will not accept a lower rate risk adjusted in one country than another. They manage, in part, their risk by having a diversified portfolio of products.³⁰

6.32 Professor O'Neill was more cautious about the potential for infrastructure bonds and told the committee that the options for government were somewhat limited:

The only thing that governments can do by way of issuing bonds or securities for the infrastructure sector in Australia - it is different in other

26 *Committee Hansard*, 9 October 2015, p. 23.

27 *Committee Hansard*, 14 August 2015, p. 25.

28 *Committee Hansard*, 14 August 2015, p. 27.

29 *Committee Hansard*, 9 October 2015, p. 23.

30 *Committee Hansard*, 9 October 2015, p. 33.

parts of the world - given the strength of the Australian fiscal scene, is offer a slightly lower cost for borrowing and a risk-sharing process.³¹

Pooling projects

6.33 The committee heard that one option to overcome difficulties in the provision of public infrastructure is packaging or pooling smaller projects together to diversify risks for investors over a longer time period using vehicles such as municipal bonds.

6.34 Mr Cordina also suggested that packaging infrastructure bonds to form a portfolio of projects, rather than a single project would be a sensible approach for risk management diversification.³²

6.35 Dr Ian Martinus, Economic Development, City of Wanneroo indicated that this option has not been sufficiently explored.³³ Dr Martinus emphasised that investors would be interested in transparent low risk packaged opportunities:

This is even for Australian investment funds and offshore sovereign funds. It really does not matter to some people what is in the basket. It matters on the level of risk. If it is backed by assets or Australian AAA bond rating or whatever this thing is, this debt guarantee, we would get our outcomes and the people considering the investment would get the opportunity.³⁴

6.36 Ms Jane McGill, Senior Policy Adviser Infrastructure, Industry Super Australia, showed that pooling projects has been tried in the UK around schools where they have the aggregator model:

They aggregate the finance and then they run multiple projects in multiple districts. But the interesting thing about it, which makes it very similar to the inverted bid model, is that the government first secures the finance—they first find the financial and investment partners—and once the money is in place, then they tender for the construction and operation of the schools. There is another similar model that does something similar in Scotland called, I think, the SPD. The inverted bid model would be very suitable to bundling a large number of projects that have similar characteristics.³⁵

6.37 Dr Martinus indicated that to make the investment instrument attractive, the competitive advantage of a region could be emphasised.³⁶ Dr Martinus spoke about the ways in which this could occur:

...a discount or zero-coupon bond, mum and pop investors could look at it as part of their superannuation or WA Super could look at. There would be great opportunity. The cocktail component derisks a lot of the elements for any one player and provides something at LIBOR plus three or whatever it

31 *Committee Hansard*, 14 August 2015, p. 15.

32 *Committee Hansard*, 9 October 2015, p. 33.

33 *Committee Hansard*, 9 October 2015, p. 4.

34 *Committee Hansard*, 9 October 2015, pp 7-8.

35 *Committee Hansard*, 5 November 2015, p. 10.

36 *Committee Hansard*, 9 October 2015, p. 8.

is. Even I as a private investor am interested in the future of this state and, obviously, Australia. The competitiveness for me and my children—being selfish—is my wanting to see them finish their further studies and work and live in reasonable proximity of where they recreate and do things with their families.³⁷

6.38 However, Mr Anthony Schinck, Chief Executive Officer, City of Ballarat, cautioned that local councils may find this impractical as local councils have difficulty in packaging small parcels of debt together.³⁸

6.39 The PC report noted the potential benefits of aggregating or bundling of smaller projects that have a higher benefit-cost ratio:

The preference for iconic projects can also come at the expense of smaller-scale projects that address particular bottlenecks or lead to more efficient use of existing infrastructure.³⁹

6.40 Further the PC report noted that smaller projects tend to have a higher benefit-cost ratios:

...The Office of the Infrastructure Coordinator...indicated that this trend reflects that smaller projects are more likely to be targeted at addressing problems that are preventing better use of the wider network.⁴⁰

Municipal bonds

6.41 The committee also heard from several witnesses that municipal bonds could be an option to finance local government infrastructure. Citi in its submission articulated that developing a municipal bond market is 'a natural extension of the infrastructure debate at the local government level'.⁴¹

6.42 Citi outlined the many ancillary benefits for issuers and investors:

Firstly, it allows the cost to be spread to future generations who will also benefit of the assets. Secondly, it prevents the need to divert funds from internally generated renewal and maintenance budgets to capital expenditure. Thirdly, debt finance promotes rules-based and market-based discipline for municipals as the ability to borrow responsibly and to meet future debt servicing obligation is normally dependent on rigorous and robust financial governance politics and long-term planning. Fourthly, it can facilitate institutional investment as local governments enjoy steady and

37 *Committee Hansard*, 9 October 2015, pp 4-5.

38 *Committee Hansard*, 5 November 2015, p. 27.

39 Productivity Commission, (2014), *Public Infrastructure*, Inquiry Report No. 71, Volume 1, p. 271.

40 Productivity Commission, (2014), *Public Infrastructure*, Inquiry Report No. 71, Volume 1, p. 272.

41 *Submission 76*, p. 2.

secure income streams like rates which can be used to meet debt servicing obligations and secure debt facilities.⁴²

6.43 Dr Joseph Drew, Research Fellow, Centre for Local Government, University of New England, discussed encouraging local or municipal bond markets with a municipal bank:

[with a] protected monopoly position, and the idea is that they use municipal funds from councils who do have the funds to spare and bank, and then lend out to councils who need funds to achieve something...They can also put small parcels of debt together, and if they were to be backed by the federal government or the state government then they would have a high bond rating and they could secure funds at a sensible interest rate.⁴³

6.44 However, Dr Drew conceded that an Australian municipal bond market may not be sufficiently large to address infrastructure needs, even if it was backed by governments. He believed that there was significant capacity for private sector involvement:

The problem there is that the estimates of the infrastructure backlog would suggest that we actually need private funds to come in, that municipal funds in themselves are not going to be enough to do the job.⁴⁴

6.45 Ernst and Young recommended that the Commonwealth investigate establishing a 'national financing authority for local government' to encourage private investment in local government infrastructure programs.⁴⁵ It suggested that this authority could:

...bundle approved council borrowings into a limited number of bond issues, which could be underwritten by the Australian Government.⁴⁶

6.46 Ernst and Young argued that low-risk and competitive municipal bonds would be an attractive investment for many private investors, including Australian superannuation companies.⁴⁷

6.47 Mr Sean Cameron, Manager for Economic Development, City of Ballarat, emphasised that when packaging projects a central organisation is needed help pull the project together. Mr Cameron suggested a revamped IA for the role:

That may be some form of Infrastructure Australia that can actually look at that and start delivering the expertise to identify back to the regions. We

42 *Submission 76*, p. 3.

43 *Committee Hansard*, 14 August 2015, p. 21.

44 *Committee Hansard*, 14 August 2015, p. 21.

45 Ernst and Young, *Strong Foundations for Sustainable Local Infrastructure: Connecting Communities, Projects, Finance and Funds* (June 2012), p. 3.

46 Ernst and Young, *Strong Foundations for Sustainable Local Infrastructure: Connecting Communities, Projects, Finance and Funds* (June 2012), p. 3.

47 Ernst and Young, *Strong Foundations for Sustainable Local Infrastructure: Connecting Communities, Projects, Finance and Funds* (June 2012), p. 3.

have done a lot of work in that space to understand what productivity improvements we can get across the city in certain projects and different economic infrastructure projects that we have a pipeline to. A lot of other cities do not have work or do not have the expertise in local government to actually identify those. It is not a case of just being asked to go to the other cities and say, 'This is what we think. Let's pool.' We also need someone to actually help work with the cities to identify those so that it does not become a wish list which says, 'We have got this road or we have this piece of infrastructure.'⁴⁸

6.48 Mr Schinck added that the assistance would be with 'packaging up the asset classes in a way that is going to be attractive to a commercial market'.⁴⁹ He suggested that this might not necessarily be based on geography but it might be based on types of asset classes:

It might be that it is more synergetic for large-scale regional cities to bundle together. However, I would be really interesting in looking at models that blend those larger regional councils with smaller rurals that have less capacity...

Really, the technical advice that we require is the opportunity, I think, to look more broadly and nationally at how we would most effectively bundle those infrastructure investment opportunities that are going to be attracted to the commercial centre.⁵⁰

6.49 Mr Schinck informed the committee that the Municipal Association of Victoria (MAV) has commenced issuing municipal bonds which is a cooperation between MAV and a large commercial bank:

I think the first or inaugural issue was for about \$200-plus million worth of bonds that was then accessible to the participating councils in a fixed rate, interest-only loan as an alternative way of financing particularly the money that is required to keep pace with the capital growth of those cities. So if I look at the cities that have accessed that, I would see the cities that are not getting a good deal out of banks or the cities that are dealing with very acute, high-growth pressures and that have an enormous civil infrastructure program that needs to be funded and funded in a way that is cost-effective for that council.⁵¹

6.50 Citi Research outlined that the strong financial position of municipal bonds could result in a new industry whereby bonds could eventually have a high credit rating in their own right.⁵²

48 *Committee Hansard*, 5 November 2015, pp 30-31.

49 *Committee Hansard*, 5 November 2015, p. 31.

50 *Committee Hansard*, 5 November 2015, p. 31.

51 *Committee Hansard*, 5 November 2015, p. 29.

52 *Submission 76*, p. 5.

Legislative issues

6.51 The Western Australian Local Government Association (WALGA) raised legislative restrictions as an additional constraint:

...Councils in WA are often constrained by restrictive legislation that limits their ability to more efficiently invest in the required infrastructure.⁵³

6.52 Mr Raymond Tame, Chief Executive Officer, City of Armadale, outlined that current legislation limits access to finance:

We have a little thing called the Local Government Act, here, which severely limits our capacity to get into private partnerships. We have to get some relaxation of that, based on aversion to risks going to historical features of state government 25 years ago.⁵⁴

6.53 Mr Schinck explained that there needs to be a greater exploration of funding that does not require grants from a higher government tier.⁵⁵ Mr Schinck indicated that the current funding model is anchored on population and financial availability. The opportunity to factor in the potential for growth is not taken into consideration:

If we were to try and fund a project now, it would really depend upon our existing book of commitments, our current financial situation and, quite honestly, what our rate revenue looks like for the next couple of years. What we are trying to get to here is a position where in fact there is a suite of financing opportunities that are available to local government in order to catalyze those projects that are going to have a long-term impact on advancing growth...⁵⁶

6.54 Mr Michael Foley, Chief Executive Officer, City of Swan, reported that the situation is compounded because borrowing from state government is still the cheapest and most reliable option:

I think the current rate is 3.09 per cent for 10 years, which is still quite cheap compared with what it was years ago. We can still do that at the moment and go and borrow too much money.⁵⁷

6.55 Dr Martinus indicated that the current approaches to funding infrastructure at the local government level are limited:

When trying to fund infrastructure...if local government, with a decent balance sheet, and knowing it can project itself for 20 or 30 years of rates, does not look at other opportunities for debt mechanisms or putting something to the market in a package, it will be limited. As was mentioned earlier, we wait on applications for federal funding or we go to the states

53 *Submission 72*, p. 4.

54 *Committee Hansard*, 9 October 2015, p. 5.

55 *Committee Hansard*, 5 November 2015, p. 27.

56 *Committee Hansard*, 5 November 2015, p. 33.

57 *Committee Hansard*, 9 October 2015, p. 6.

and we beg, but we rarely look at our balance sheets or a public-private mechanism.⁵⁸

Private sector investment

6.56 The PC report provides data on the scale of private sector investment in public infrastructure:

...the ABS National Accounts data indicates that the value of Australia's capital stock of public infrastructure was approximately \$991 in 2013 (at current prices, comprised of general government (\$432 billion), non-financial corporations (\$520 billion) and financial corporations, households and not-for-profits (\$39 billion) (ABS 2013b). The non-financial corporations category includes both private and public corporations. While no accurate data are available, an indicative estimate is that public non-financial corporations owned about half the infrastructure in these selected industries, and private non-financial corporations owned the other half (or about \$260 billion).⁵⁹

6.57 The PC considered that privately issued bond finance 'can play a role in infrastructure investment, the availability of this type of finance can be a source of competitive pressure on other types of finance'.⁶⁰

6.58 A number of witnesses recognised the option of private sector investment and ownership of public infrastructure. Mr Eslake, expressed the view that there is:

...a role for private finance in infrastructure spending and not all infrastructure spending needs to be financed by government debt. Not all infrastructure assets need to be owned and managed by governments.⁶¹

6.59 Dr McLeod noted that the appropriateness of private sector investment is related to the source of funding.

There are projects where I think a proponent could say, 'This ought to be justifiably done with government money,' and there are others where you could justifiably say, 'This is almost a purely private work. User charges would essentially fund it and that is how we intend to do it.'⁶²

6.60 Similarly, Professor O'Neill made the point that:

The thing that drives the delivery and operation of infrastructure is the source of funding. So it is not, 'What is the capacity of governments to borrow?' It is, 'What is the capacity of governments to actually provide either a taxation stream to fund that finance, or to generate the conditions

58 *Committee Hansard*, 9 October 2015, p. 4.

59 Productivity Commission, (2014), *Public Infrastructure, Inquiry Report No. 71*, Volume 1, p. 180.

60 Productivity Commission, (2014), *Public Infrastructure, Inquiry Report No. 71*, Volume 1, pp 230-234.

61 *Committee Hansard*, 14 August 2015, p. 6.

62 *Committee Hansard*, 9 October 2015, p. 34.

for user pays in order for other ways to be put in place for that finance to be funded?⁶³

6.61 However, Professor O'Neill also noted the cost of private sector financing:

Certainly, if you issued government bonds there would be a slightly lower cost of capital than if the private sector raised the same amount of money. The issue is how you pay for the cost of capital.⁶⁴

6.62 Professor O'Neill also pointed out that where the private sector does own public infrastructure that it is important for the government to regulate the market to deliver public benefit:

The role of governments is to create the conditions for market competition. Only governments can regulate the way that the market operates. Only governments can legitimise the securing of profit and its subsequent ownership as private wealth. The private sector would love to do it in a much more streamlined process where they do not have to compete for it, but we know that the benefits of private enterprise are at their greatest when private enterprise is subject to competition. That is the role of government in the infrastructure sector: to make sure that there are no easily gotten gains and that, once the private sector secures ownership and operation of the asset, there are dynamic efficiencies that are brought to bear through the regulatory structures in order to make sure that the public benefit is maximised.⁶⁵

Public-private partnerships

6.63 Public-private partnerships (PPPs) are a mechanism for facilitating private sector investment in infrastructure projects. A PPP is a long term contract:

...between the public and private sectors where government pays the private sector to deliver infrastructure and related services on behalf, or in support, of government's broader service responsibilities. PPPs typically make the private sector parties who build infrastructure responsible for its condition and performance on a whole-of-life basis.⁶⁶

6.64 The committee heard from Standard and Poor's Ratings Services that, PPPs could have substantial benefits for government:

As well as potentially freeing up funds that can be allocated in other areas, cost overruns are typically lower in privately-financed projects, and risk is also transferred, with the private party bearing the overrun cost. It is often the case that good infrastructure benefits the whole economy. Typically privately-backed projects are more innovative and efficient on several

63 *Committee Hansard*, 14 August 2015, p. 9.

64 *Committee Hansard*, 14 August 2015, p. 9.

65 *Committee Hansard*, 14 August 2015, p. 16.

66 Department of Infrastructure and Regional Development, (2008 December), National PPP Guidelines Overview, p. 7.

measures, including energy consumption, with benefits flowing through to other areas of the economy.⁶⁷

6.65 Mr Jack Gilding, Executive Officer, Tasmanian Renewable Energy Alliance Inc, supported the use of PPPs and provided an example where it has been successfully used to produce renewable energy infrastructure:

... the ACT government put out to tender for what they called a reverse auction. They said, 'Who will bid the lowest price to give us renewable energy for the next 20 years?' The price that the ACT government got was 8c a kilowatt hour, which is certainly a little bit higher than the current wholesale price, but it is a fixed price for 20 years. So when you do the net present value of that, it is actually a very affordable source of electricity. That is the way of the energy consumer seeing that they got the best possible value—by getting private developers to compete against each other and coming up with the cheapest price for a new renewable capacity.⁶⁸

6.66 Mr Martin Locke, appearing in a private capacity, suggested that there are a number of risk management factors that should inform whether projects are undertaken as a PPP:

...you actually have to have an equation where you can say the benefits from cost efficiency or risk transfer more than outweigh the higher costs of raising private financing, as compared to public financing...When I look at this concept of risk transfer, what it is really saying is that the private sector is putting its hand up and saying, 'We are in a better position to actually manage those risks and give you, the public sector, a better outcome'. So, in terms of management of construction risks or maintenance risks, the private sector, in some cases, has certainly been seen to demonstrate that it can generate value over and above public sector delivery.⁶⁹

6.67 However, Ms McGill challenged the notion that risk could be transferred to the private sector:

This issue of de-risking is a really interesting one, because we had a lot of projects that failed based on overly optimistic forecasts around demand and people became more and more reluctant to take on that risk, and the supply of capital around tollway projects pretty much dried up. Someone then came up with this notion that they will de-risk projects so that the government would hold on to that patronage risk or that demand risk and then the project could be financed. We take a different view. The use of availability payments, like they did on the Peninsula Link, does work in certain circumstances, but why would governments engage with the private sector in this sort of PPP arrangement if they are not transferring risk to the private sector to be managed?⁷⁰

67 *Submission 63*, p. 9.

68 *Proof Committee Hansard*, 14 April 2016, p. 9.

69 *Committee Hansard*, 14 August 2015, p. 35.

70 *Committee Hansard*, 5 November 2015, p. 10.

6.68 Dr McLeod commented that, then:

...there is the question of whether we have the right financial instruments to feed into the processes. Many PPPs, as I pointed out in that research paper, end up being very, very complex structures with very, very many participants, which makes the process of risk management even harder over time, because the consortium members have different expectations.⁷¹

6.69 While Professor O'Neill agreed that private sector involvement in infrastructure had its place, he suggested that governments need to take a new approach to PPPs. Professor O'Neill called for closer regulatory requirements to ensure transparency and effective assessments of when private investment is most appropriate:

...We really need to know under which circumstances and under what sorts of regulations private infrastructure provisions thrive, and in which regulatory circumstances private infrastructure does not thrive. When does the public get most benefit?...Whether you are an advocate of public sector efficiency or of the benefits of the market, what we do know is that efficient knowledge and learning from the past in order to improve to the future is at the core of economic progress. And here we have in the infrastructure sector -probably the newest emerging private economic sector in the world -governments intervening in ways that inhibit learning, because we do not know the conditions under which privatisations take place, so we cannot say: 'That is good. That is not working. This is working. Let's move the regulatory regime in that particular direction.'⁷²

6.70 The committee heard that while the use of PPPs has been increasingly popular over recent years there have been 'mixed results'.⁷³ Ms Terrill informed the committee that:

Recent large infrastructure projects in Australia have typically suffered from cost overruns of about 15 per cent, while patronage has been 15 per cent lower than projected.⁷⁴

6.71 While the PC noted several successful PPPs they also highlighted examples of PPP infrastructure projects that had incurred financial losses. For example, the Latrobe Regional Hospital in Victoria suffered operational losses incurred from a low initial bid price and because of the 'inability of the private sector consortium to make the efficiency gains originally assumed.' The New South Wales Government incurred losses from the Sydney Airport Rail Link after the PPP partner failed to meet scheduled payments to creditors.⁷⁵

71 *Committee Hansard*, 9 October 2015, p. 28.

72 *Committee Hansard*, 14 August 2015, p. 11.

73 Productivity Commission, *Public Infrastructure, Inquiry Report No. 71* (2014), Volume 1, p. 7.

74 *Submission 65*, p. 6.

75 Productivity Commission, *Public Infrastructure, Inquiry Report No. 71* (2014), Volume 1, p. 7.

6.72 Mr Locke was also concerned that currently the flow of investment into Australia was pushing the rate of returns too low for many investors to find PPPs attractive:

...the pressure of the flow of money internationally and from the domestic superannuation fund is actually putting real downward pressure on the yields available in infrastructure, and certainly some commentators would say that we are at a point where, almost, the returns are being pushed too low. If you are looking at it from the perspective of a superannuation fund, given the significant reduction in yields available in the bond market, it becomes quite difficult to see how you can easily get longer term yielding assets to provide the rate of return that superannuants are looking for.⁷⁶

Local government

6.73 The committee heard that for investors, local government projects were often insufficient in size and had limited return on investment. As a result obtaining infrastructure finance is difficult. Mr Brenton West, Chief Executive Officer, Southern Tasmanian Councils Authority considered that:

The scale of the state is sometimes prohibitive without government incentive to make it occur. There are a number of brownfield and greenfield sites throughout the region that could be infilled, but it is getting the right investment conditions and the right incentives to make it occur.⁷⁷

6.74 Mr West re-iterated that user pays funding⁷⁸ such as tolls and taxes may not work for local governments:

With the small size of southern Tasmania, with a diverse and spread-out population, it is difficult to see that we have the scale of Melbourne or Sydney or a culture of toll roads.⁷⁹

6.75 Mr Schinck explained that in regional Australia it is difficult to attract private equity, capital or investment regardless of the improvements it will generate:

...simply because the returns on investment are not always there or not always comparable to capital cities, to airports, to other forms of infrastructure. We find it very difficult to be able to package up blended investment into projects. As I said, it quite often relies on the council...having to fund projects to a large extent or having to leverage off both state and federal opportunities for funding...⁸⁰

76 *Committee Hansard*, 14 August 2015, p. 35.

77 *Committee Hansard*, 6 November 2015, p. 18.

78 *Committee Hansard*, 6 November 2015, p. 18.

79 *Committee Hansard*, 6 November 2015, p. 13.

80 *Committee Hansard*, 5 November 2015, p. 27.

Superannuation funds

6.76 Standard & Poor's Ratings Services highlighted that Australia's expanding superannuation industry provides an opportunity to fund infrastructure investment that will in turn drive stronger economic growth:

...the pool of superannuation funds could be used to help fund infrastructure, given the budget constraints faced by Australian governments.⁸¹

6.77 Standard & Poor's noted that Canadian pension funds are some of the largest investors in Australian infrastructure. They highlighted to the committee a number of barriers preventing greater investment from the superannuation industry in local infrastructure, namely:

...the mismatch between superannuation funds' liquidity needs and the illiquid nature of infrastructure as an investment class. Canadian pension funds, for example, don't face the same requirements and therefore can invest much more heavily in infrastructure. As defined benefit schemes (as opposed to defined contribution schemes, as in Australia), Canadian funds can focus more strongly on maximising long-term returns and less on investing in liquid asset classes. In particular, Australian super funds need to maintain liquidity because consumers can switch between super funds at will to seek higher returns; in Canada, defined benefit schemes mean consumers have little reason to switch between pension funds.⁸²

6.78 The PC also mentioned the difference between Canadian and Australian funds and noted that:

...the majority of superannuation funds in Canada are larger defined benefit funds, whereas Australia's are predominantly smaller defined contribution funds, which might allow Canadian funds to accept more liquidity risk.⁸³

6.79 Standard & Poor's expressed the view that the participation of Australian superannuation funds should be encouraged as they 'may provide a more stable source of funding'⁸⁴ and suggested that to address the issue of liquidity other models should be considered:

If growth is a key policy objective, and illiquidity is determined to be a key inhibitor to accessing private sector funds to fund viable infrastructure projects, then supporting the development of liquid, tradable claims on infrastructure projects through private sector innovation or co-investment

81 *Submission 63*, p. 10.

82 *Submission 63*, p. 10. This example solely illustrates the impact of the liquidity mismatch, and does not suggest defined benefit schemes are superior or preferable to defined contribution schemes.

83 Productivity Commission, (2014), *Public Infrastructure*, Inquiry Report No. 71, Volume 1, p. 119

84 *Submission 63*, p. 10.

models with the government would appear to be worthy in our view of further consideration.⁸⁵

6.80 Mr John Lawrence, appearing in a private capacity, commented that 'infrastructure spending will grow the national pie.'⁸⁶ Mr Lawrence advocated for a mandated purchase of government bonds by superannuation funds to finance infrastructure investment:

For me, the rationale to borrow for infrastructure does not rely on the fact that government borrowings are low compared to other countries or that interest rates are at record lows. The reason it is a good idea is that payment of interest does not consume resources or reduce GDP; it is simply a split up of the enlarged pie. For every dollar of government borrowings someone holds a financial asset. It can easily be mandated that super funds, for instance, especially those in the pension stage that are paying nil tax and wishing to hang onto their tax concessions—which look like they may be revised—use a small fraction of their two trillion in assets to buy government bonds....

...Payment of interest, the splitting up of the GDP pie, then becomes part of retirement income policy.⁸⁷

6.81 Mr Fitzgerald, cautioned against using Australian superannuation as a funding source for infrastructure without value capture:

The problem there—and perhaps I should have qualified it—is that superannuation could be a funding source, but only if there is a value capture mechanism supporting the user charges and possible federal grants. If it was part of the funding mix, that would be okay, but I am just horrified by the thought of workers' hard-earned savings being thrown to the wolves because of these extravagant infrastructure costs, extravagant traffic flow funding models, and then a poor financing mechanism using \$14 or \$15 tolls for people to get to work each day. It is just not going to work.⁸⁸

Industry super funds

6.82 Ms McGill informed the committee the superannuation system currently had assets exceeding \$2 trillion. This is set to increase to \$6 trillion by the mid-2030s 'when we would rival the banking system in total assets'.⁸⁹

6.83 Ms McGill confirmed that investment in infrastructure is already occurring and they 'have assets around the world'.⁹⁰ Ms McGill explained investing in infrastructure is an attractive option for industry superannuation funds:

85 *Submission 63*, p. 10.

86 *Proof Committee Hansard*, 14 April 2016, p. 14.

87 *Proof Committee Hansard*, 14 April 2016, p. 14.

88 *Committee Hansard*, 5 November 2015, p. 46.

89 *Committee Hansard*, 5 November 2015, p. 7.

90 *Committee Hansard*, 5 November 2015, p. 7.

As you would be aware, the funds have very long investment time horizons, which make it possible for them to invest in such illiquid assets. On average, the funds have 20 per cent of their assets in unlisted assets like infrastructure. Our wholly owned fund manager, IFM Investors, is the largest infrastructure investor in Australia and one of the top three infrastructure investors globally, so we already playing with the big boys. They have delivered fantastically for our members. Over two decades their fund has achieved an average return of 11.5 per cent after tax and after fees, which is a very attractive return compared with equity markets.⁹¹

Greenfield investment

6.84 Ms McGill indicated that most of their investments are in brownfields assets and they almost never invest in greenfields projects.⁹² The PC explained that:

Brownfields asset classes are attractive to institutional investors, such as superannuation funds, because they provide a long-term stable net revenue stream with low operating risks...⁹³

6.85 The Industry Super Association informed the committee that changes in Australia around the current bid model for infrastructure investments are needed to allow the superannuation industry to realise investment in greenfields projects. Ms McGill highlighted that the current bid process for greenfields projects are convoluted, costly, time-consuming and uncertain.⁹⁴

6.86 Ms McGill outlined that the superannuation funds are in a different position to short-term investment banks. Short-term investment banks can put capital at risk, with a view to winning one out of three or four projects. Ms McGill commented that superannuation funds cannot use member money to loss lead a project:

We are not in a position to say 'We are going to bid for this project and by the way we need \$10 million out of the funds in order to cover the costs of the bid.' If the bid costs stay as high as they are now, we will stay on the sidelines in terms of greenfield investment. We do not want that to be the case. We want to begin to engage in the greenfield sector. It is great diversification for us and offers high returns because there are greater levels

91 *Committee Hansard*, 5 November 2015, p. 7.

92 *Committee Hansard*, 5 November 2015, pp 7-8. The PC explained that 'Greenfields infrastructure involves construction of new assets (which may require land acquisition and environmental and planning approvals) for which there is no pre-existing demand for the service. Greenfields projects can also involve high construction cost-risk and if the project fails there is no or limited alternative use for the asset. Demand risk is high as there is little data available to assess patronage risk and the like. In contrast, brownfields projects involve assets for which demand for the service already exists and is well understood but where the assets may be in need of improvement, refurbishment or expansion.' See Productivity Commission, (2014), *Public Infrastructure*, Inquiry Report No. 71, Volume 1, pp. 130, 187.

93 Productivity Commission, (2014), *Public Infrastructure*, Inquiry Report No. 71, Volume 1, p. 188.

94 *Committee Hansard*, 5 November 2015, p. 8.

of risk to manage, but it really flexes our muscles in terms of our capacity to manage assets over the long term.⁹⁵

6.87 Ms McGill pointed to a misalignment of interests between short and long term investors created by the current bid model. Short-term investors are currently bidding for, and building long-term infrastructure projects, yet are not in it for the long term:

They come in and they structure the bid, they earn in some cases tens of millions of dollars of fees for doing that, but as soon as financial close on that project has been achieved they are gone. That introduces a real dilemma because if you are not going to be accountable for your financial forecasts and the viability of the project, you are going to be really motivated to make overly optimistic forecasts because that is how you come out with the cheapest price and that is how you win the bid. You get your transaction fees and you go.⁹⁶

6.88 Dr Robert Bianchi, Associate Professor of Finance, Griffith University, encouraged more investment in greenfield projects and proposed:

...for the Australian Commonwealth government to finance and fund new greenfield infrastructure projects while they are in the design and construction phases. Once the infrastructure project progresses to the operations phase, the government can on-sell the asset to the superannuation industry as a mature infrastructure project...⁹⁷

6.89 Dr Bianchi also suggested changing the funding mix during the lifecycle of infrastructure projects to encourage greater involvement from superannuation funds: For example:

[The] superannuation industry can be encouraged to invest in a greenfield infrastructure project based on the investors receiving government availability payments when risk is at its highest in the design and construction phases. When the greenfield project progresses to the operations phase, the availability payment ceases and it is replaced by a market based toll/fee for the use of the public infrastructure.⁹⁸

'Inverted bid' model

6.90 Ms McGill suggested a different funding model called 'the inverted bid' which would lower the initial cost of participation by securing the long-term owner operator:

...it might be a Future Fund, it might be a QIC, it might be Aussie Super, it might be an IFM Investors, it might be a consortium of them. What is important is that they are equity investors, not debt, and that they are in it for the long haul. That does not mean they can never sell that asset down but they are much more likely to hold an asset like that for its life than they are to sell it. Once the government has established that partnership with a

95 *Committee Hansard*, 5 November 2015, p. 8. See also *Submission 68*, p. 14.

96 *Committee Hansard*, 5 November 2015, pp. 6-7.

97 *Submission 66*, p. 15.

98 *Submission 66*, pp 15-16.

group of long-term equity investors, they then move onto phase 2, where they have a bundled tender for the other project partners. The other project partners would be your construction, your operation and maintenance and all your legal and other advisory services. You pay a small price to get into the game at the outset and going through what is called this equity funding competition to see if you are the successful bidder. If you are unsuccessful you walk away, you have not lost a great deal of money; if you are successful, you will incur further costs but it is in connection with a real, tangible project.⁹⁹

6.91 The committee heard that the inverted bid model would be suited to larger, more complex projects because:

...[t]he inverted bid model brings a level of sophistication and elevates the quality of the partnership with government around a project that is more complex and hence more risky. It also gives you the scope for government and the investment partner to actually say, 'Let's imagine down the track that something changes, how would we manage adjusting the contract to achieve that outcome?' That is not possible under the current model. So yes, complex and risky projects and probably large, expensive projects.¹⁰⁰

6.92 Ms McGill indicated that Industry Super Australia has participated in the PC review and have undertaken extensive consultation in relation to the inverted bid model. The process was favoured by construction companies as:

Construction companies hate the current bid process, because they have to bear quite a lot of the cost in order to be involved. They see our model as a much neater solution, because the money is already there on the table and they just have to do what they do best and bid for the construction of a project.¹⁰¹

6.93 The PC ultimately came up with its own 'hybrid' model 'which pursues the same objective as the inverted bid model and adopts a number of its elements' while overcoming 'some of the shortcomings' and 'offers a more gradual change'.¹⁰²

Self-managed super funds

6.94 Mrs Andrea Slattery, Managing Director and CEO, Self-Managed Super Fund (SMSF) Association, told the committee that the SMSF sector is suited to investing in and funding infrastructure:

With \$590 billion funds under management in the SMSF sector, which is predicted to grow to \$2.2 trillion by 2033 by the Deloitte Access Economics report, with about one-third of these funds held in low-risk assets, we believe the SMSF sector is ideally suited to infrastructure

99 *Committee Hansard*, 5 November 2015, p. 8.

100 *Committee Hansard*, 5 November 2015, p. 9.

101 *Committee Hansard*, 5 November 2015, p. 9.

102 Productivity Commission, (2014), *Public Infrastructure*, Inquiry Report No. 71, Volume 1, p. 257.

investment. This large pool of low-risk preferred capital would be viable in a stable source of Australian infrastructure funding in the years to come.¹⁰³

6.95 Mrs Slattery explained that infrastructure offers an attractive alternative investment as it has a risk-return point between cash and fixed interest and equity investments:

Additionally, the asset's characteristics of low volatility, stable yield and acting as an inflation hedge is attractive to SMSFs, whether they are still saving or in the retirement phase. Such assets help SMSF investors attain sustainable retirement income and manage longevity risks.¹⁰⁴

6.96 However, the committee heard that while there is appetite for investment in infrastructure, currently there are significant barriers to this occurring in the areas of liquidity and high investment management fees:

Currently SMSFs are extremely limited in investing directly in infrastructure due to the high dollar threshold for infrastructure investment and the illiquid nature of the required investment. Also, the high investment management fees for non-direct infrastructure investments can be a disincentive for those cost-aware SMSF investors. We believe that addressing these liquidity issues and removing administrative barriers will provide the most significant challenges in allowing SMSFs to have better opportunities to invest in infrastructure projects.¹⁰⁵

6.97 Mrs Slattery suggested that overcoming the current limitations could be achieved by unitising investment and infrastructure projects to smaller investment units or parcels for SMSFs, in the area of \$25,000 units or issuing small scale government or other infrastructure bonds. Developing a secondary market for these products would allow SMSFs to manage liquidity risks, especially in retirement phase so they can realise their SMSF capital to generate income.¹⁰⁶

6.98 Mr Jordan George, Head of Policy, SMSF Association, explained that with the length of infrastructure projects, bonds would have different values at different times which would allow people to get in and out at different phases.¹⁰⁷ Mr George stressed that people with self-managed superannuation funds need to have assets or products that generate stable, long-term returns but with flexibility.¹⁰⁸

6.99 The PC also noted liquidity requirements which, it was argued, constrained the ability of superannuation funds to invest in relatively illiquid asset classes such as infrastructure. They also noted that others have argued against such changes in order

103 *Committee Hansard*, 5 November 2015, p. 35.

104 *Committee Hansard*, 5 November 2015, p. 35.

105 Mrs Slattery, *Committee Hansard*, 5 November 2015, p. 35.

106 *Committee Hansard*, 5 November 2015, p. 35.

107 *Committee Hansard*, 5 November 2015, p. 39.

108 *Committee Hansard*, 5 November 2015, p. 39.

to assure stability in the superannuation system. The PC concluded that the primary objective of superannuation funds is to provide benefits to retiring members:

Australian superannuation funds already have relatively high average asset allocation to unlisted infrastructure relative to other developed country pension funds, and can invest in infrastructure assets through a range of channels — particularly in mature brownfield assets — either directly, or through pooled open-ended unlisted infrastructure funds and various index funds.

More generally, infrastructure funds have an incentive to optimise their portfolio between different asset classes, with liquidity being one of the considerations. Interventions that blunt those incentives would be sub-optimal.¹⁰⁹

Accounting and management

6.100 IA state in their Infrastructure Plan that:

More effective use of public borrowing that differentiates between 'good debt' for infrastructure investment and 'bad debt' to meet unsustainable operating expenses.¹¹⁰

6.101 Mr Eslake strongly supported the separation of infrastructure spending in the Commonwealth government accounting:

...state and territory governments have, in most cases, for 15 or more years presented their budgets and subsequent financial reports, mid-year economic updates and the like in overtly accrual accounting terms so that the measure of their fiscal prudence or otherwise is usually the net operating balance, which is revenues minus recurrent expenses, including interest and depreciation. Separate consideration is then given to the capital budget, financed by the operating surplus, if there is one then government borrowings, various leasing and other financing transactions. That would encourage what I think is a more mature, sensible and commercial view of infrastructure spending. And accrual accounting is, of course, the way listed companies and private businesses manage their financial affairs and very few businesses regard borrowing to fund long-term investment as inappropriate.¹¹¹

Infrastructure funds

6.102 Professor Hewson, agreed with the separation of infrastructure spending from recurrent spending, and suggested money raised from infrastructure bonds:

109 Productivity Commission, (2014), *Public Infrastructure*, Inquiry Report No. 71, Volume 1, p. 244.

110 Infrastructure Australia, *Australian Infrastructure Plan – Priorities and reforms for our nation's future* (2016) – Report, p. 90.

111 *Committee Hansard*, 14 August 2015, p. 5

...go into a separate fund, separate from consolidated revenue, that would be professionally managed and administered. It would be available for use as equity and/or debt finance for specific projects.¹¹²

6.103 The PC explains:

The term 'infrastructure fund' potentially captures a variety of models. Some involve funding dedicated to a specific-purpose fund within the public sector. This may or may not be accompanied by new rules, criteria and processes (including between levels of government) to determine the allocation of funds. Other models may involve the creation of a new entity to administer the funds and/or other forms of financial support. Such approaches are more akin to the 'infrastructure bank' model.¹¹³

6.104 The PC noted the suggestion of infrastructure funds as a means to:

...address problems with the availability and certainty of funding for infrastructure projects, and could also include governance arrangements which provide incentives for better project selection and more efficient delivery.¹¹⁴

6.105 During its inquiry, the PC noted that IA proposed consolidating government funding sources into a single national fund. IA suggested that this would:

...improve the quality, efficiency and transparency of infrastructure spending by leading to a more robust prioritisation of projects, and a move away from a project-by-project view of infrastructure development...¹¹⁵

6.106 In its Infrastructure Plan, IA again proposed establishing an infrastructure fund to encourage consistent decision making and to ensure funds are directed where they are needed most. IA's plan identified multiple Commonwealth infrastructure funding programs with singular purposes and individual assessment frameworks. IA identified that prioritising infrastructure projects is at times unnecessarily disjointed:

Infrastructure spending is dispersed according to often overlapping purposes of different funding pools. This means the outcomes of the Australian Government's infrastructure spending can be inconsistent and poorly directed. This situation reflects the tendency by governments to establish single funds to solve single problems rather than taking an integrated network approach.¹¹⁶

6.107 At the Melbourne hearing IA also spoke about this proposal:

112 *Committee Hansard*, 14 August 2015, p. 25.

113 Productivity Commission, (2014), *Public Infrastructure*, Inquiry Report No. 71, Volume 1, p. 291.

114 Productivity Commission, (2014), *Public Infrastructure*, Inquiry Report No. 71, Volume 1 p. 291.

115 Productivity Commission, (2014), *Public Infrastructure*, Inquiry Report No. 71, Volume 1 p. 291.

116 Infrastructure Australia, *Australian Infrastructure Plan – Priorities and reforms for our nation's future* (2016) – Report, p. 23.

At the moment there are lots of different separate funds. This is largely looking at it from a federal government level. There are lots of different federal funds. We are suggesting that, particularly within transport, that they are brought together in one fund.¹¹⁷

6.108 Professor Hewson proposed that an infrastructure fund could co-invest with banks and other private equity groups to develop some projects:

....every project would be structured in a projects-financed sense—perhaps differently one to the next, there are different mixtures of debt and equity—but that fund would be in a position to drive it. With the government putting its imprimatur, if you like, through the fund on such projects, I think the private sector bank and private equity sector would be well attracted to that.¹¹⁸

Infrastructure bank

6.109 The concept of an infrastructure bank is active in Europe in the form of the European Investment Bank¹¹⁹ and under consideration in the USA (the National Infrastructure Development Bank).¹²⁰

6.110 As noted earlier in this chapter, Dr Drew proposed an infrastructure bank for municipal borrowing:

The recommendation is a municipal bond bank where you can have the best of both worlds. They can also put small parcels of debt together, and if they were to be backed by the federal government or the state government then they would have a high bond rating and they could secure funds at a sensible interest rate.¹²¹

6.111 The PC noted the benefits of an infrastructure bank:

- increasing the pool of funds available for infrastructure investment and filling the gaps in private sector finance
- reduced transaction costs through improved procurement processes and the development of public sector expertise in infrastructure financing

117 *Proof Committee Hansard*, 1 March 2016, p. 8.

118 *Committee Hansard*, 14 August 2015, p. 25.

119 Productivity Commission, (2014), *Public Infrastructure*, Inquiry Report No. 71, Volume 1, p. 229. See <http://www.eib.org/about/> (accessed 2 December 2015) where it is noted that the EIB raises the bulk of lending resources on the international capital markets through bond issues. Their rating allows them to borrow at advantageous rates.

120 The Build USA Act would create an American Infrastructure Bank, as a wholly owned government corporation, to provide methods for funding transportation projects for states. See <https://www.congress.gov/bill/114th-congress/senate-bill/1296> (accessed 2 December 2015).

121 *Committee Hansard*, 14 August 2015, p. 20.

- the ability to diversify and spread specific project risks across a wide pool of infrastructure assets through the infrastructure bonds issued by the bank.¹²²

6.112 However, the PC found that the costs of establishing an Infrastructure Bank in Australia were likely to outweigh the benefits, as outlined:

- ...the pool of funds available for infrastructure and the extent of government involvement in funding are a distinct issue from how those funds are administered – an infrastructure bank is not a prerequisite for increasing government funding...
- ...the Commission can see risks associated with government ownership of a bank. Since the 1990s, the financial system in Australia has largely moved away from government ownership of financial institutions...
- ...there is a risk that the establishment of an infrastructure bank would create pressure to fund projects that would otherwise not pass a cost-benefit assessment, simply because there is capital available at any given time.¹²³

6.113 Ultimately the PC concluded that an infrastructure bank 'appears to offer little benefit in addressing the identified issues in Australian infrastructure investment'.¹²⁴ While noting some potential benefits, the PC could not justify providing unique specialised support for infrastructure via a dedicated funding stream.

122 Productivity Commission, (2014), *Public Infrastructure*, Inquiry Report No. 71, Volume 1 p. 228.

123 Productivity Commission, (2014), *Public Infrastructure*, Inquiry Report No. 71, Volume 1 p. 229.

124 Productivity Commission, (2014), *Public Infrastructure*, Inquiry Report No. 71, Volume 1 p. 207.

Chapter 7

Conclusion

7.1 Infrastructure is fundamental to Australia's prosperity and quality of life. The federal government has a central role in providing financing infrastructure expenditure across all levels of government.

7.2 The committee agrees that the right level of investment in public infrastructure cannot be identified without also exploring: the government's appetite to fund spending; the private sector's appetite to invest; and the public's willingness to pay, either through taxation or direct charges. Opportunity cost is at the heart of infrastructure financing and expenditure. Infrastructure Australia put it simply: we get the infrastructure we are prepared to pay for.

Getting into debt again: public and private financing

7.3 Since the global financial crisis, the role of public infrastructure spending to provide economic stimulus has added another dimension to the question; what is the right level of infrastructure spending? The committee accepts the consensus among local and global economists that spending on productive infrastructure is an important lever in fiscal policy.

7.4 The current cost of debt provides government an historic opportunity to invest, particularly if the cost of debt can be locked in through long-term maturity. The committee accepts the evidence that significant increases in debt are likely to affect Australia's AAA credit rating. However, the committee also heard that this would not necessarily materially affect the price of debt for federal or state governments. More pertinently, the benefit of investing in productivity enhancing infrastructure is that it improves economic conditions, and this should outweigh increases in interest repayments. Investing in the right infrastructure will provide a net benefit to the economy.

7.5 The committee heard that there is a demand in the private sector for government infrastructure bonds to provide a secure long-term investment. Coupled with the call for fiscal stimulus, the committee believes now is the right time for the federal government to increase debt to fund investment in productivity enhancing infrastructure.

7.6 The committee also heard that the federal government could assist lower tiers of government in gaining access to finance by either underwriting borrowing or undertaking borrowing on their behalf. While the responsibility for infrastructure delivery largely sits with state, territory and local government, the federal government has the capacity to borrow at lower rates given its access to a wider tax base.

7.7 The committee heard that the market for municipal bonds in Australia is immature and is not likely to grow significantly without federal government intervention. Federal government underwriting or issuing bonds on behalf of other levels of government would help overcome concerns about the size and liquidity of

infrastructure bonds; and would further assist by providing a mechanism to pool projects together, including across jurisdictions.

7.8 Pooling projects under the auspice of the federal government would also help direct finance towards the maintenance of infrastructure. The committee notes that maintenance gaps are more easily identified than gaps in new service provision: because maintenance is about retaining an existing level of service. In most cases it can be assumed that there is a desire to retain this level of service. However, because maintenance projects are usually small, there is a need to pool them together to attract finance.

Recommendation 1

7.9 The committee recommends that the federal government increase its level of borrowing to fund productivity enhancing infrastructure.

Recommendation 2

7.10 The committee recommends that the federal government issue infrastructure bonds to fund federal, state, territory and local government investment in infrastructure.

7.11 The committee agrees that government does not need to be the sole source of finance for infrastructure, and that the private sector plays a significant role in the provision of public infrastructure in Australia. A one-size-fits-all approach is not a sensible approach to the consideration of financing for infrastructure projects.

7.12 The committee agrees with the evidence that the suitability of public or private financing is heavily dependent on the nature of the project. Generally speaking, where the benefits that arise from infrastructure spending are not directly attributable to any private gain, then government debt is likely to be the least-cost option. Conversely, where private gain can be attributed to infrastructure and can be captured in the market, then private equity is more likely to be competitively priced. Put crudely, the private sector is likely to be interested in direct investment when infrastructure—often big projects—has an income stream associated with it.

7.13 The committee heard that commonly used models to attract private equity—particularly so-called public-private partnerships—are not necessarily the most efficient means of attracting private equity. The committee agrees that attracting private equity partners prior to and separately from the contract for project delivery—the so-called inverted bid model—is likely to expand the field of finance available, and decrease the cost of capital accordingly.

Recommendation 3

7.14 The committee recommends that the federal government utilise the inverted bid model when seeking to attract private equity finance.

Horses for courses: value capture, user pays and private equity

7.15 The committee agrees that—again, generally speaking—where there is a private gain that stems from the provision of infrastructure then the beneficiary should contribute to the funding of infrastructure spending.

7.16 The committee heard consistent evidence that Australia is underutilising value capture as a source of funding. The committee agrees that where private gain is reflected in land prices, then value capture should be considered as a source of funding for infrastructure.

7.17 The committee agrees that the simplest and most reliable and equitable means of capturing the benefit (or detriment) to land holders is a broad-based land tax. The committee also agrees that a broad-based land tax would help provide security for the issuance of infrastructure bonds.

7.18 The committee agrees that where the private gain is in the provision of a service, then user charges should be considered as a funding source for infrastructure. The committee heard evidence that there is latent capacity for user pays funding to be utilised, particularly for transport infrastructure. However, the committee did not consider in detail the different mechanisms in place or available to increase user charges.

7.19 However, the committee believes it is important to temper the consideration of value capture or user charges with the consideration of equity of access and ability to pay. Public infrastructure often provides a benefit to society that goes beyond the individual and is not able to be monetised. The committee does not advocate the transfer of the cost of funding infrastructure to users or beneficiaries *carte blanche*. Infrastructure funding should be a balance between value capture and user pays, and general revenue.

7.20 The committee heard that the federal government's Asset Recycling Program has been used to fund infrastructure spending by state governments. However, the committee agrees with the evidence that asset recycling—irrespective of its merits—is not a funding source inherent to the provision of infrastructure. The decision to spend the proceeds of assets sales on infrastructure is no different to the decision to spend any other source of revenue on infrastructure. Outside of overarching budgetary considerations, the sale of one asset has no bearing on the funding of another asset.

Recommendation 4

7.21 The committee recommends that the access by state and territory governments to funding from infrastructure bonds is contingent on the introduction of broad-based land tax.

Good debt and bad debt: properly accounting for infrastructure

7.22 The committee heard that the public discourse about infrastructure spending is influenced by the way government investment is accounted for. Unlike state, territory and local governments—and most large businesses—the federal government does not use accrual accounting; debt for recurrent purposes and debt for infrastructure are routinely conflated when government borrowing is considered. This erodes the

capacity of government to explain when and how funding and maintaining infrastructure by making a capital investment upfront and paying for this over time is prudent and worthwhile.

7.23 The committee believes that the establishment of a separate set of books for infrastructure would make government financing and spending on infrastructure more transparent. Establishing an independent infrastructure fund would allow the distinction to be made between government liabilities associated with infrastructure and recurrent borrowing. This would better enable the public to understand where their money is going.

7.24 An independent infrastructure fund would also improve confidence among investors and provide the framework to attract equity investment from the private sector. An independent infrastructure fund would manage the balance of government borrowing and private equity, and would manage any revenue from taxation and user pays revenue associated with infrastructure spending.

7.25 An independent infrastructure fund would complement Infrastructure Australia, with Infrastructure Australia managing project selection and the infrastructure fund managing project finance.

Recommendation 5

7.26 The committee recommends the establishment of an independent infrastructure fund to manage federal government funding and spending for infrastructure.

Recommendation 6

7.27 The infrastructure fund would be overseen by an independent board. The fund would manage Commonwealth grants for infrastructure and the distribution of funds raised by infrastructure bonds. The fund would also be empowered to attract and manage private equity investment.

Improving investor confidence: making the politics transparent

7.28 There are clearly improvements that can be made in infrastructure decision making. Addressing the political dimensions of project selection is central to this. This point has been consistently made by successive reports and commentary on infrastructure spending in Australia, so much so that it has become a cliché.

7.29 The committee believes that infrastructure decisions are and should be political decisions. However, the political nature of project selection must be offset by objective project evaluation, increased transparency and a greater emphasis on long-term planning to guide project selection. This will improve the quality of infrastructure in Australia and, in turn, improve investor confidence.

7.30 Infrastructure funding provided by the federal government should be contingent on objective project assessments being undertaken. These project assessments—including cost-benefit analysis and the underlying assumptions—should then be made public before funding is decided upon.

7.31 The results of a project assessment should not necessitate the acceptance or rejection of a project. Project assessments are unavoidably constrained in how widely and accurately they can measure the costs and benefits of projects. There may be social, community or productivity benefits which are not able to be quantified but that should not be discounted.

7.32 However, the final decision on funding particular projects should still be a political decision that provides the opportunity for considerations beyond the scope of the assessment to be taken into account. The publication of project assessments prior to the decision of government would create an obligation to explain any departure from the objective assessment, including where the government believes that a project assessment was unable to sufficiently quantify costs or benefits.

Recommendation 7

7.33 The committee recommends that a project assessment be required for all projects seeking federal funding and that this project assessment be published prior to a funding decision being made.

Recommendation 8

7.34 The committee recommends that the level of detail required for project assessment should be graded according to the scale of the project, with larger projects being required to undertake more detailed cost-benefit analysis. Similarly, the time period between publication of project assessment and a funding decision should be graded according to the scale of the project, with evaluations for larger project being required to be made public for a longer period before a funding decision is made.

7.35 Infrastructure Australia is best placed to manage the criteria for, and evaluation and publication of project assessments. However, Infrastructure Australia's current remit would need to be expanded beyond that of nationally significant infrastructure if it were to be responsible for all project assessment that receives federal funding. In doing so, Infrastructure Australia would need to assume some of the responsibility currently vested with government departments. This change would require detailed consideration of managing and resourcing issues before being pursued further.

Recommendation 9

7.36 The committee recommends that the government consider widening Infrastructure Australia's powers to include the responsibility for all project assessment for projects seeking federal funding.

Recommendation 10

7.37 The committee recommends that the government consider diverting resources currently provided to the Department of Infrastructure and Regional Development for project assessment to Infrastructure Australia.

7.38 Infrastructure Australia already has responsibility for developing a national plan. The criteria for assessment should include the adherence of any particular project with Infrastructure Australia's national plan as well as relevant state, territory and local plans. Again, any deviation from the objectives in relevant plans should be articulated in the project evaluation and able to be scrutinised before a political decision is made.

Recommendation 11

7.39 The committee recommends that the criteria for project assessments include the proposed project's adherence to relevant federal, state, territory and/or local government infrastructure plans.

Senator Peter Whish-Wilson

Chair

APPENDIX 1

Submissions and additional information received by the committee

Submissions

- 1 Queensland Association of Independent Legal Services
- 2 Mr Chris Hamill
- 3 Mr Frank Stilwell
- 4 Association for Good Government
- 5 Aboriginal Legal Service (NSW/ACT) Limited
- 6 Reconciliation Australia
- 7 Youth Connections National Network
- 8 Australian Medical Students' Association
- 9 Isolated Children's Parents' Association of Australia Inc.
- 10 Australasian Railway Association
- 11 National Aboriginal and Torres Strait Islander Legal Services
- 12 St Vincent de Paul Society
- 13 United Services Union
- 14 Victorian Principals Association
- 15 Federation of Ethnic Communities' Councils of Australia
- 16 National Family Violence Prevention Legal Services
- 17 Australian Parents Council
- 18 Australian Council of Trade Unions
- 19 South West Group
- 20 Australian Manufacturing Workers' Union
- 21 National Association of Community Legal Centres
- 22 Australian National Audit Office
- 23 Equity Practitioners in Higher Education Australasia
- 24 Refugee Council of Australia
- 25 The Australian Psychological Society Limited
- 26 Australian Council of Social Service

27	Mr Rodger Gibson
28	The Australia Institute
29	People for Public Transport
30	ABC
31	Australian Medical Association
32	Queensland Nurses' Union
33	Australian Council of State School Organisations
34	Community and Public Sector Union
35	Australian Nursing and Midwifery Federation
36	ACT Government
37	Universities Australia
38	Australian Education Union
39	Australian Nursing and Midwifery Federation
40	COTA
41	United Voice
42	Associate Professor Philip Laird
43	Aboriginal Peak Organisations Northern Territory
44	Grattan Institute
45	South Australian Government
46	National Union of Students
47	Australian Automobile Association
48	Mr Andrew Herington
49	Public Transport Users Association
50	Reclink Australia
51	Free TV Australia
52	Save Our SBS Inc
53	Mr Quentin Dempster
54	National Sea Highway
55	Australian Womensport and Recreation Association
56	Womensport and Recreation Tasmania Inc
57	Mr Colin H.Howlett
58	Mrs Susan Macdonald
59	Ms Val Sterling

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- 60 Professor John Freebairn
- 61 Local Government Association of South Australia
- 62 South Australian Government
- 63 Standard & Poor's Ratings Services
- 64 Professor Steve Keen
- 65 Marion Terrill, Transport Program Director, Grattan Institute
- 66 Dr Robert Bianchi, Associate Professor of Finance, Griffith University
- 67 Prosper Australia
- 68 Industry Super Australia
- 69 City of Ballarat
- 70 The Tasmanian Polar Network
- 71 Mr Robert D M Cotgrove
- 72 Western Australian Local Government Association
- 73 Australian Airports Association
- 74 Mr George Burrows
- 75 Hobart Airport
- 76 Citi Research
- 77 Scientia Professor Trevor McDougall
- 78 Dr Barrie Pittock PSM
- 79 Associate Professor Stephen Wilson, Associate Professor Clare Murphy
and Professor David Griffith
- 80 Professor Neville Nicholls
- 81 Tasmanian Polar Network
- 82 Australian Meteorological and Oceanographic Society (AMOS)
- 83 Ms Mary Voice
- 84 National Growth Areas Alliance (NGAA)
- 85 Dr Paul Fraser
- 86 Dr Paul Durack
- 87 CSIRO Staff Association
- 88 Mrs Mary Wilkinson
- 89 UNSW Climate Change Research Centre
- 90 Young Earth System Scientists Community
- 91 Dr Alex Sen Gupta

92	Dr Sophie Lewis
93	Mr Gavin A. O'Brien
94	Dr Nerilie Abram
95	Mr James Ricketts
96	Mrs Elly Spark
97	Climate Alliance Limited
98	Royal Zoological Society of NSW
99	Professor Peter Banks
100	Ms Kate Summers
101	Mr David Arthur
102	Associate Professor Irene Penesis
103	World Climate Research Programme
104	Mr Michael Davis
105	Mr John Curnow

Additional information

1	Additional information from Reclink Australia, received 5 February 2015
2	Correction to evidence from Canberra Public hearing, 18 March 2015, provided by the Department of Treasury, received 15 April 2015
3	Correction to evidence from Hobart Public hearing, 8 March 2016, provided by CSIRO, received 15 March 2016
4	Advice provided by the Clerk of the Senate, received on 15 March 2016
5	Correction to evidence from Canberra Public hearing, 7 April 2016, provided by CSIRO, Dr Larry Marshall, received 21 April 2016
6	Correction to evidence from Canberra Public hearing, 7 April 2016, provided by CSIRO, Ms Hazel Bennett, received 21 April 2016

Answers to Questions on Notice

1	Answers to questions taken on notice from Canberra Public hearing, 16 October 2014, provided by the Australian Council of Social Service, received 14 November 2014
2	Answers to questions taken on notice from Canberra Public hearing, 16 October 2014, provided by the Australian Education Union, received 14 November 2014
3	Answers to questions taken on notice from Canberra Public hearing, 16 October 2014, provided by the Australian Council of Trade Union, received 14 November 2014

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- 4 Answers to questions taken on notice from Canberra Public hearing, 16 October 2014, provided by Anglicare NSW South, NSW West and ACT, received 14 November 2014
 - 5 Answer to question taken on notice from Canberra Public hearing, 25 November 2014, provided by Reclink Australia, received 9 December 2014
 - 6 Answers to questions taken on notice from Canberra Public hearing, 26 March 2015, provided by Australian Securities and Investments Commission, received 14 March 2015
 - 7 Answer to question taken on notice from Melbourne public hearing on 11 March 2016, provided by Dr Peter Craig, received 16 March 2016
 - 8 Answers to questions taken on notice from Hobart public hearing on 8 March, provided by CSIRO on 17 March, 6 April and 22 April 2016
 - 9 Answer to question taken on notice from Melbourne public hearing on 11 March 2016, provided by Professor Karoly, received 20 March 2016
 - 10 Answers to questions taken on notice from Canberra public hearing on 7 April 2016, provided by CSIRO, received 16,18, 20, 21, 26 and 27 April 2016
 - 11 Answers to written questions taken on notice following Canberra Public hearing, 7 April 2016, provided by CSIRO, received 15, 18 and 26 April 2016

Tabled documents

- 1 Planning Institute Australia, Tabled Document 1, Melbourne 13 November 2014
- 2 Planning Institute Australia, Tabled Document 2, Melbourne 13 November 2014
- 3 Mr Andrew Herington, Tabled Document 1, Melbourne 13 November 2014
- 4 Australian Broadcasting Corporation, Tabled Document 1, Canberra 12 December 2014
- 5 Friends of the ABC, Tabled Document 1, Canberra 12 December 2014
- 6 Mr Saul Eslake, Tabled document 1, Sydney 14 August 2015
- 7 Western Australian Members of the National Growth Areas Alliance WA, Tabled document 1, Perth 09 October 2015
- 8 Professor Peter Newman, Tabled document 1, Perth 09 October 2015
- 9 Pracsys Consultants, Tabled document 1, Perth 09 October 2015
- 10 Professor Snow Barlow, Tabled document 1, Melbourne 11 March 2016
- 11 CSIRO Opening Statement, Tabled document 1, Canberra 7 April 2016
- 12 Digital Tasmania, Tabled document 1, Hobart 14 April 2016
- 13 Tasmanian Labor, Tabled document 1, Hobart 14 April 2016

- 14 Engineers Australia, opening statement, Tabled document 1, Hobart 14 April 2016
- 15 Tasmanian Unions, Tabled document 1, Hobart 14 April 2016
- 16 CSIRO, Tabled document 1, Canberra 27 April 2016

APPENDIX 2

Public Hearings

Thursday, 16 October 2014
Senate Committee room 2S3
Parliament House, Canberra

Witnesses

Australian Council of Social Service

Dr Cassandra Goldie, Chief Executive Officer
Ms Jacqueline Phillips, Director of Policy

Anglicare ACT Youth Connections

Ms Jennier Kitchin, Director, Community Services ACT
Ms Shyanne Watson, Coordinator, Youth and Educational Support Services
Canberra

National Tertiary Education Union (NTEU)

Mr Paul Kniest, Policy and Research Coordinator

Women in Adult Vocational Education (WAVE)

Ms Linda Simon, National Convenor
Ms Jozefa Sobski, Member

Australian Education Union

Mr Angelo Gavrielatos, Federal President
Ms Jennifer Devereaux, Federal Research Officer

Ballarat Grammar

Mr Stephen Higgs, Headmaster

St Vincent de Paul Society

Dr John Falzon, Chief Executive Officer

Australian Medical Students' Association

Ms Jessica Dean, President
Mr Kunal Luthra, Vice President External

National Union of Students

Ms Deanna Taylor

Australian Council of Trade Unions

Mr Dave Oliver, Secretary
Mr Matt Cowgill, Economic Policy Officer
Ms Pat Forward, ACTU National VET Committee
Mr Tim Shipstone, Industrial Officer
Mr Ian Curry, National Coordinator, Skills, Training & Apprenticeships,
Mr Arthur Rorris, NSW South Coast Labour Council
Mr Lance McCallum, National Policy Officer, Electrical Trades Union of
Australia

Australian Chamber of Commerce and Industry

Ms Jenny Lambert, Director, Employment, Education and Training
Mr John Osborn, Director, Economics and Industry Policy

Thursday, 13 November 2014
Legislative Council Committee Room
Parliament House, Melbourne

Witnesses

Victorian Local Governance Association

Councillor Sebastian Klein, President of the Victorian Local Governance
Association
Mr Andrew Hollows, Chief Executive Officer

Professor Jago Dodson, Professor of Urban Policy, RMIT University

Mr William McDougall, Private capacity

Eastern Transport Coalition

Councillor Peter Lockwood, Chair
Mr Matthew Hanrahan, Manager of Sustainable Infrastructure, Knox City
Council

Public Transport Users Association

Ms Cait Jones, Campaign Director

Planning Institute Australia

Mr Brendan Nelson, President Elect, President Elect

Mr Andrew Herington, Private capacity

Professor Peter Newman, Private capacity

McKell Institute

Mr Sam Crosby, Executive Director

*Tuesday, 25 November 2014
Senate Committee room 2S3
Parliament House, Canberra*

Witnesses**Reclink Australia**

Mr Rod Butterss, Director
Mr John Ballis, Interim Chief Executive Officer
Mr Peter Cullen, Founder
Mr Brian Millett, Participant

*Friday, 12 December 2014
Senate Committee room 2S3
Parliament House, Canberra*

Witnesses**Australian Broadcasting Corporation**

Mr Mark Scott, Managing Director
Mr Michael Millett, Director, Corporate Affairs
Mr David Anderson, Director, Corporate Strategy and Planning

SBS

Mr Michael Ebeid, Managing Director
Mr James Taylor, Chief Financial Officer

Community and Public Sector Union

Mr Michael Tull, National President
Ms Sarah Hunt, Lead Organiser for Public Broadcasting (ABC)

Media, Entertainment and Arts Alliance

Mr Christopher Warren, Federal Secretary
Mr Paul Murphy, Director, Media

Mr Quentin Dempster, Journalist, author and broadcaster

Dr Andrew Ford, Radio National broadcaster, writer and composer

Department of Communications

Ms Nerida O'Loughlin, Deputy Secretary

Dr Simon Pelling, First Assistant Secretary, Consumer and Content Division
Ms Ann Campton, Assistant Secretary, Media

Creative Industries Faculty, Queensland University of Technology (via teleconference)

Professor Brian McNair, Professor of Journalism
Dr Adam Swift, Senior Research Associate
Dr Ben Goldsmith, Senior Research Fellow

ABC Friends (via teleconference)

Ms Glenys Stradijot, National Spokesperson

Save Our SBS (via teleconference)

Mr Steve Aujard, President

Wednesday, 18 March 2015
Senate Committee room 2S1
Parliament House, Canberra

Witnesses

Department of Treasury

Mr Nigel Ray, Deputy Secretary, Fiscal Group
Mr Matthew Flavel, General Manager, Budget Policy Division
Mr Matt Crooke, Principal Adviser, Budget Policy Division

Thursday, 26 March 2015
Senate Committee room 2S3
Parliament House, Canberra

Australian Securities and Investments Commission

Mr Carlos Iglesias, Chief of Operations

Friday, 14 August 2015
Jubilee Room
Parliament House, New South Wales

Witnesses

Mr Saul Eslake, Economist

Professor Phillip O'Neill, Director and Professorial Research Fellow, Centre for Western Sydney, University of Western Sydney

**Dr Joseph Drew, Research Fellow in Local Government, Business School,
University of New England**

**Professor John Hewson, Professor/Chair, Tax and Transfer Policy Institute,
Australian National University**

**Mr Martin Locke, Adjunct Professor, Faculty of the Built Environment,
University of New South Wales**

Friday, 9 October 2015

Cliftons

Perth, WA

Witnesses

**Western Australian Members of the National Growth Areas Alliance WA Outer
Metropolitan Councils**

Mr Mike Foley, Chief Executive Officer, City of Swan

Mr Ray Tame, Chief Executive Officer, City of Armadale

Dr Ian Martinus, Economic Development Manager, City of Wanneroo

**Professor Peter Newman, Professor of Sustainability, Curtin University
Sustainability Policy Institute (via teleconference)**

**Ms Jemma Green, Research Fellow and Doctoral Candidate, Curtin University
Sustainability Policy Institute**

Urban Development Institute of Australia (WA Division)

Ms Debra Goostrey, Chief Executive Officer

Mr Jeremy Cordina, Chair, UDIA (WA) Infrastructure Committee

Associate Professor Paul McLeod, Director, Economic Research Associates

Property Council of Western Australia

Mr Lino Iacomella, Property Council of Australia Deputy Executive Director

Ms Rebecca Douthwaite, Policy Advisor

Pracsys Consultants

Mr Michael Chappell, Managing Director and Founder

Mr Jason McFarlane, Principal Consultant (WA)

Thursday, 5 November 2015
Room G1
Parliament House, Melbourne

Witnesses

Grattan Institute

Ms Marion Terrill, Transport Program Director

Industry Super Australia (Submission 68)

Ms Jane McGill, Senior Adviser, Infrastructure

Municipal Association of Victoria (Submission 69)

Mr Anthony Schink, Chief Executive Officer, City of Ballarat

Mr Sean Cameron, Manager Economic Development

Standard and Poor's Ratings Services (Submission 63)

Ms Fabienne Michaux, Head of Developed Markets Asia-Pacific

Mr Thomas Jacquot, Director, Corporate and Government Ratings

Mr Craig Michaels, Director, Sovereign and Public Finance Ratings

SMSF Association

Ms Andrea Slattery, Managing Director, Chief Executive Officer

Mr Jordan George, Head of Policy

Prosper Australia

Ms Catherine Cashmor, President

Mr Karl Fitzgerald, Project Director

Friday, 6 November 2015

Room 1

Parliament House, Tasmania

Witnesses

Glenorchy City Council

Mayor Kristie Johnston

Southern Tasmanian Councils Authority

Lord Mayor Ms Sue Hickey, Chair of STCA

Mayor Deirdre Flint OAM, Board Member of STCA

Mr Brenton West, Chief Executive Officer

Hobart International Airport

Ms Melinda Percival, General Manager Corporate Affairs

Luti Consulting

Mr James McIntosh, Transport Planner and Economist

The Tasmanian Polar Network (Submission 70)

Mr John Brennan, Chairman

Hobart Northern Suburbs Rail Action Group (Via teleconference)

Mr Ben Johnston, President

Tuesday, 1 March 2016

Senate Committee Room 2S3

Parliament House, Canberra

Witnesses**Infrastructure Australia**

Mr Phil Davies, Chief Executive Officer

Mr Adrian Dwyer, Executive Director – Policy and Research

Tuesday, 8 March 2016

Room 1

Parliament House, Tasmania

Witnesses**Integrated Marine Observing System**

Mr Tim Moltmann, Director

Department of the Environment

Dr Gwen Fenton, Chief Scientist, Australian Antarctic Division

Institute for Marine and Antarctic Studies

Professor Richard Coleman, Executive Director

Professor Nathan Bindoff, Head of the Oceans and Cryosphere Program

Dr John Church, Private capacity**Dr Richard Matear, Private capacity****Scientia Professor Trevor McDougall (via teleconference)****CSIRO**

Ms Hazel Bennett, Chief Finance Officer

Dr Alex Wonhas, Executive Director, Environment, Energy and Resources (via teleconference)

Professor Brigid Heywood, Deputy Vice-Chancellor (Research), University of Tasmania

Dr Tony Press, Private capacity

CPSU – CSIRO Staff Association

Ms Jessica Munday, CPSU Regional Secretary

Mr Mark Green, CSIRO Tasmania Section Councillor

Tasmanian Polar Network

Mr John Brennan, Chairman

Friday, 11 March 2016

Room G3

Parliament House, Melbourne

Witnesses

Dr Karl Taylor, Private capacity (via teleconference)

Dr Paul Durack, Private capacity (via teleconference)

Antarctic Climate and Ecosystems Co-operative Research Centre

Professor Tony Worby, Chief Executive Officer

Professor David Karoly, Private capacity

Professor Snow Barlow, Private capacity

Professor Richard Eckard, Private capacity

Dr Greg Ayers, Private capacity

Dr Paul Fraser, Private capacity

Dr Bruce Forgan, Private capacity

Dr Peter Craig, Director of the Collaboration for Australian Weather and Climate Research

Dr Graeme Pearman, Private consultant and Senior Research Fellow, Monash University

Scripps Institution of Oceanography (via teleconference)

Professor Tony Haymet, Distinguished Professor of Oceanography, Emeritus Vice-Chancellor and Director, UC San Diego

Thursday, 7 April 2016

Senate Committee Room 2S3

Parliament House, Canberra

Witnesses**CSIRO**

Dr Larry Marshall, Chief Executive Officer

Mr Craig Roy, Deputy Chief Executive Officer

Ms Hazel Bennett, Chief Financial Officer

Thursday, 14 April 2016

Hobart Function and Conference Centre

Hobart, Tasmania

Witnesses**Digital Tasmania**

Mr Andrew Connor, Spokesperson

Tasmanian Renewable Energy Alliance

Mr Jack Gilding, Public and Executive Officer

Mr John Lawrence**Tasmanian Greens**

Ms Cassy O'Connor MP, Leader of the Greens, Member for Denison

Tasmanian Minerals and Energy Council

Mr Wayne Bould, Chief Executive Officer (via teleconference)

Mr Ray Mostogl, Chair of TMEC Energy Sub Group

Mr Greg Zooeff, member

TASICT

Mr William Kestin, Chief Executive Officer

Mr Alan Rosevear, Vice President

Tasmanian Labor

The Hon Bryan Green MP, Leader of the Opposition, Member for Braddon

Tasmanian Minister for State Growth, Minister for Energy and Minister for Environment, Parks and Heritage

The Hon Matthew Groom MP, Liberal Member for Denison

Engineers Australia

Dr Vicki Gardiner, General Manager Tasmania Division

Professor Michael Negnevitsky

Unions Tasmania

Mr Steve Walsh, Secretary

Mr Trevor Gauld, Secretary CEPU

Mr Luke Crowley, Professionals Australia

Wednesday, 27 April 2016

Senate Committee Room 2S1

Parliament House, Canberra

Witnesses

CSIRO

Dr Larry Marshall, Chief Executive

Mr Craig Roy, Deputy Chief Executive

Ms Hazel Bennett, Chief Financial Officer

Dr Alex Wonhas, Executive Director, Environment, Energy and Resources