



Australian Government

Department of Infrastructure and Transport

Senate Standing Committee on Education,
Employment and Workplace Relations

**Inquiry into the shortage of engineering and
related employment skills**

Submission by the
Department of Infrastructure and Transport

February 2012

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Introduction

The Commonwealth Department of Infrastructure and Transport (the Department) contributes to the wellbeing of all Australians by assisting the Government to promote, evaluate, plan and invest in infrastructure and by fostering an efficient, sustainable, competitive, safe and secure transport system.

The Department provides policy advice to the Minister for Infrastructure and Transport and delivers a wide variety of programs on behalf of the Australian Government, conducts research and analysis, provides safety information and advice, and performs regulatory functions.

This submission addresses the following issues in response to the inquiry:

- Australia's infrastructure task;
- The skills gap and responses to date;
- Responding to skills capability; and
- Broader initiatives to improve infrastructure delivery.

Australia's Infrastructure Task

Investment in infrastructure is investment in the economy. Infrastructure investment increases productivity, competitiveness and economic growth, improving opportunities and raising our standard of living. Australia's productivity agenda has a clear focus on infrastructure delivery. As a critical enabler of better economic performance in the wider economy, improving the quantity and quality of infrastructure projects in Australia is a key way to improve the nation's competitiveness and productivity.

There are various estimates of Australia's future infrastructure task, particularly in terms of the resources sector and the public sector. All of these estimates say significant investment in productive infrastructure in Australia is required, highlighting the need for a pool of readily available engineering and related employment skills.

The Department is responsible for the largest ever Commonwealth Government commitment to Australia's transport infrastructure – the *Nation Building Program* representing an investment of more than \$36 billion over the six years to 2013-14. As a consequence, the Department has a keen interest in seeing issues addressed that constrain the Commonwealth's capability to deliver this program – such as skills shortages – in a cost effective and timely manner.

Investment in infrastructure has been proven to improve the productivity of the nation. Improving the quality of infrastructure development in Australia, including through greater skills capability, and removing impediments to greater private financing of public infrastructure are key ways to improve Australia's competitiveness and national productivity.

The Skills Gap and Responses to Date

The Department notes the Australian Government's support for the work of the Australian National Engineering Taskforce (ANET), which brings together the Australian Council of Engineering Deans and engineering peak bodies to conduct key research on workforce development, including issues of demand and supply and making engineering studies more accessible and relevant. The Department also notes ANET's report *Scoping Our Future: Addressing Australia's Engineering Skills Shortage* (October 2010) that highlights the challenges in a range of industries, including for infrastructure delivery, created by a shortage of engineering and related employment skills.

We note the Government has already recognised that skills shortages in the engineering profession are a concern, with potential to constrain investment and productivity growth. While these issues are most apparent in the resources sector, they also impact upon the effectiveness of other sectors such as manufacturing, construction and civil engineering.

Responding to Skills Capability

Within the Department

The Department has and is leading reforms to streamline procurement processes, improve industry efficiency, reduce costs and remove barriers to entry to increase investment in infrastructure to ensure Australia can remain internationally competitive and improve national productivity. Examples of these reforms are detailed in the following sections of this submission. These reforms have and will continue to assist the engineering and civil construction sectors by providing greater certainty to plan and invest in skills, training and workforce development to increase the capacity required to respond to the nation's challenging future infrastructure task.

Broader Initiatives to Improve Infrastructure Delivery

The Department has implemented and is undertaking a range of reforms to improve the business and investment environment. They include the following.

National Infrastructure Construction Schedule

The Department is currently working to establish a comprehensive National Infrastructure Construction Schedule (NICS). The NICS will list all large economic and social infrastructure projects in Australia that have any Commonwealth, state/territory and local government funding.

This major initiative will complement Infrastructure Australia's high level National Priority List, by providing a deeper pipeline of construction projects, thereby providing greater certainty to private sector participants in our national infrastructure market. A key aim of the NICS is to attract greater competition into the infrastructure market, thereby enhancing competitive bidding and efficient project delivery to drive better value for money outcomes.

In addition, by providing a deeper pipeline of construction projects, the firm 'deal flow' that construction companies have long sought will now be self-evident. This in turn provides all constructors with greater confidence to both plan and 'skill up' their workforces to contribute in delivering Australia's future infrastructure requirements.

The NICS will be operational by May 2012 and will be delivered as a web-based information hub, providing a single, national view of planned and tendered infrastructure projects that:

- have a public commitment by government to fund, in whole or part, its construction with a capital value of \$50 million or more; and
- cover all industry sectors and all jurisdictions.

Microeconomic Reform

Government must ensure that the microeconomic conditions for investment are as efficient and sound as possible.

The Department has played an integral role in delivering a range of initiatives through the auspices of the Council of Australian Governments (COAG) Infrastructure Working Group (IWG). These reforms have been variously aimed at identifying and supporting industry best practice, streamlining approval processes, reducing duplication and inconsistencies across jurisdictions, improving risk allocation, improving tendering processes and reducing bid costs for the private sector.

By assisting industry to be more efficient, the engineering and construction sectors are better able to invest their skills efforts into infrastructure delivery, rather than diverting valuable resources into administration and related tasks. Reforms that have been completed over the past two years and new reforms currently underway to assist the engineering and construction sectors include:

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- **Prequalification System** - A vital reform in establishing a seamless economy has been the implementation of a National Prequalification System. Prequalification is a risk management tool frequently used by states and territories in assessing tenders for infrastructure delivery. The National Prequalification System commenced on 1 January 2011 and has removed barriers to competition and reduced costs for operators by streamlining the tender process for contractors working in multiple jurisdictions on projects valued over \$50 million. The approach has helped to facilitate industry development and workforce mobility.
- **Public-Private Partnerships (PPPs)** - The Australian Government has put in place a National PPP Policy Framework to encourage greater participation by the private sector in delivering key infrastructure projects. PPPs provide an important means for improved service delivery and better value for money through the appropriate transfer of risk. PPPs also encourage innovation and an integrated, whole-of-life management of projects underpinned by private financing. Implementing the National PPP Policy Framework provides a consolidated, uniform, national framework for the cost effective procurement and delivery of PPPs to drive consistent application of best-practice across Australia. This has significantly streamlined the delivery of PPPs nationally.
- **Alliance Contracting** - Alliancing has evolved to become a broadly accepted procurement and delivery method. It has been used to successfully deliver many risky and complex projects in Australia which involve considerable expenditure of public funds. In response to opportunities to drive greater value for money from alliance projects, the National Alliance Contracting Policy Principles and Guidelines provide an integrated framework for the assessment, delivery and benchmarking of alliance contracting, giving rise to cost savings and streamlining processes.
- **Design and Construct (D&C)** - The Department, in cooperation with the Victorian Department of Treasury and Finance, is currently examining further improvements to infrastructure delivery through traditional contracting to drive better value for money. Work is underway to develop ways to reduce bid costs and streamline processes, thereby creating a more efficient environment for the private sector's involvement in national infrastructure projects.

Encouraging Further Competition

Creating opportunities for international firms to be involved in new methods for infrastructure delivery - such as PPPs and alliancing, can realise better value for money outcomes through driving stronger competition, attracting greater private investment, increasing innovation and delivering a greater quantity and quality of infrastructure projects in Australia.

Australia has an open regulatory regime and welcomes foreign investment in infrastructure and participation in the construction and engineering sectors. Australia has had some success in attracting a number of major foreign construction firms into Australia's infrastructure market, including some from Europe and Asia. Attracting further international companies with skills and experience in infrastructure financing and delivery clearly has an ongoing role in addressing existing skill shortages, capability quality, as well as encouraging further innovation within the infrastructure and construction sectors. The Department is actively working to develop a longer term strategy to attract major international engineering and construction firms to Australia.

Conclusion

The Department acknowledges the implications of the shortage of engineering and related employment skills for infrastructure delivery. Increasing the quantity and quality of infrastructure projects delivered is vital to increasing Australia's productivity, competitiveness and living standards.

The Department is taking a lead role in improving Australia's infrastructure stocks by delivering the \$36 billion *Nation Building Program* and undertaking reforms to:

- identify and support industry best practice;

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- streamline approval processes;
- reduce duplication and inconsistencies across jurisdictions;
- improve risk allocation;
- improve tendering processes;
- reduce bid costs for the private sector; and
- attract increased investment in infrastructure projects.

By investing in infrastructure and undertaking the reforms noted in this submission, the Department seeks to continue playing a reform role that complements wider workforce planning and training initiatives to address the skills shortage in the engineering and related sectors.