



Garnaut Climate Change Review

Response to Interim Report

11 April 2008



GRID AUSTRALIA RESPONSE TO THE GARNAUT CLIMATE CHANGE REVIEW INTERIM REPORT

1. Introduction

Grid Australia is pleased to make this submission to the Garnaut Climate Change Review, in response to the electricity transmission issues raised in the Review Interim Report.

Grid Australia represents the owners of approximately \$10 billion of regulated electricity transmission network assets in Australia. This includes almost all the transmission grid which underpins the National Electricity Market in 5 States. Grid Australia's members have substantial experience with transmission pricing arrangements, and with the terms upon which generators are connected to the network. Grid Australia's members also have first-hand experience with the issues associated with connecting remote generators to the network, including the costs and technical issues posed by the connection of remote low emission generation technologies (most notably, wind generation).

Grid Australia considers that the issues identified in the Interim Report regarding the price signals for infrastructure provision could be addressed through modest changes to the existing regulatory arrangements, in a way which minimises distortions to the existing arrangements which are based on economic efficiency principles. Having dealt with similar issues in the past, Grid Australia is well placed to assist in working through these issues, and would be pleased to make its expertise available to the Review to assist it in achieving its important objectives.

Grid Australia acknowledges that the potential significance of climate change may require a reassessment of the National Electricity Market policy settings by Government. While this is a matter for Government, Grid Australia is also well placed to contribute constructively to policy proposals focussed on transmission investment.

2. Issues Identified in the Interim Report

Whilst the Interim Report focuses on major climate change policy imperatives such as the Emissions Trading Scheme, it also touches on some specific aspects of the existing regulatory arrangements for the National Electricity Market (NEM) and the separately regulated Western Australian electricity market.

In particular, the final section of Chapter 4 identifies what are considered to be instances of 'market failure' in the provision of supply side infrastructure, including the provision of electricity transmission infrastructure; with the specific problem described as follows:¹

The first firm to build an electricity transmission line from a generator in a new location to the grid, or a CO₂ pipeline from a generator to a suitable storage site, will face a disproportionate part of the total cost of an infrastructure system that later has other users.

These circumstances generate tendencies for each potential user of new infrastructure to delay investment in the hope that another may take the first step. In addition, they may lead to potential investors in low-emissions power generation who would need to use new infrastructure assuming

¹ Garnaut Climate Change Review, 2008, Interim Report to the Commonwealth, State and Territory Governments of Australia, February, p.55.

that they would have to meet the full cost of pioneering investment, even if there were some prospect of investment costs being shared by others. These considerations raise the commercial hurdles over which the investment must jump before an investor decides to proceed. The higher hurdle is likely to lead to unnecessary caution and underinvestment.

Grid Australia appreciates the Review's concern about the efficiency of provision of electricity transmission infrastructure and the pricing and regulatory arrangements that apply thereto. A secure, reliable and efficient transmission network is critical to Australia's economic well-being, the needs of consumers, as well as the efficient provision of current and future electricity generation, including low emission technologies. In this context, Grid Australia recognises the need to examine the arrangements applying to electricity transmission and other energy transportation infrastructure to ensure that those arrangements harmonise to the extent possible with Australia's response to addressing climate change.

This submission elaborates on the relevant existing regulatory arrangements for electricity transmission, based on economic efficiency principles, and provides suggestions for modest changes to those existing arrangements which could be made to address the issues raised in the Interim Report.

In essence, the Interim Report has raised issues regarding the effectiveness of the existing electricity market transmission pricing arrangements in accounting for the cost impacts of generator and customer location decisions.

This matter raises a range of complex issues and has been amongst the most vexing and controversial since the NEM commenced over a decade ago. It also raises the same challenges for the more recently established WA electricity market. Having said that, the specific concern raised – namely, the potential for the first mover to bear an inappropriate share of the costs of connecting to the network and consequent incentive to defer connection in order to 'free ride' on others – may well be remedied with modest changes to the existing arrangements. This matter is discussed further in section 4 of this submission.

3. The Existing Transmission Arrangements – the NEL, NER and AEMC

The National Electricity Law (NEL) sets out the legal basis for the regulation of the electricity sector (other than in WA). The detail of this regime is given effect through the National Electricity Rules. The Rules create the wholesale energy market and associated settlement arrangements, sets out the regime for regulating the price that transmission and distribution businesses may charge, and sets out all parties' technical and access obligations. These access obligations include the transmission network service providers (TNSPs') obligations with respect to negotiating with new generators for connection to the network. The WA wholesale electricity market and network access code is similar to the NEL but also has its nuances.

To allow the Rules to evolve over time and respond to changing exogenous factors, the Rules can be changed through a robust process assessed by an independent entity - the Australian Energy Market Commission (AEMC). The principal guidance for the AEMC when assessing whether to change the Rules, after receiving such an application, is

whether the proposed Rule change would promote the National Electricity Objective², which is defined as follows:³

The objective of this Law is to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to—

- (a) price, quality, safety, reliability and security of supply of electricity; and
- (b) the reliability, safety and security of the national electricity system.

A similar regime also applies in WA, where the relevant objective is described as follows:⁴

The objective of this code ... is to promote the economically efficient:

- (a) investment in; and
- (b) operation of and use of,

networks and services of networks in Western Australia in order to promote competition in markets upstream and downstream of the *networks*.

The balance of this submission addresses the identified issues with reference to the NEL. However, in developing solutions that advance the national interest in promoting low emission electricity generation technologies, care needs to be taken to ensure that the solutions accommodate the separate WA electricity market. Grid Australia would be happy to provide a more detailed description of the points of difference if this is of interest to the Review.

Importantly, the key focus of both the National Electricity Objective and the WA Code is the pursuit of economic efficiency, and TNSPs are incentivised to act in a manner that promotes efficiency. This is also reflected in the specific guidance for pricing.

4. Arrangements for Connecting to the Network

The Interim Report raises some specific issues regarding the new transmission line assets required between the existing shared transmission network and the site of the new generator, and the assets required to physically connect the transmission extension to the shared network. Whilst these assets are typically, but not universally, provided by TNSPs; the terms on which the service is provided are negotiated bilaterally between the TNSP and the new generator. Indeed, the new generator has the option to build and own a large portion of the assets itself if it so desires (the TNSP's monopoly exists only in the vicinity of the physical point of connection).

The terms of these bilateral agreements are commercially sensitive and cannot be disclosed in a public submission. However, Grid Australia can assure the Review that although these agreements generally do make provision for future users of the relevant asset, it is not standard practice to permit a later connecting generator to use the existing transmission line for marginal cost. Rather, it could be considered standard practice to require the later connecting generator to pay a share of the fixed costs (with the share of

² NEL, section 88.

³ NEL, section 7.

⁴ Electricity Networks Access Code 2004 (WA), clause 2.1.

costs paid by the later generator rebated to the earlier generator), which in turn would substantially reduce – or eliminate altogether – any capacity to ‘free ride’ on the pioneering generator. These arrangements are generally referred to as “shared connection services”.

Grid Australia would be happy to provide the Review with further information on the character of the arrangements that are typically entered into for these services, if this is of interest to the Review.

One area where there may be a gap in the present regulatory arrangements, however, is where a cluster of new generators may locate in a particular area in the future, but where there is uncertainty in this regard. As the terms for new transmission extensions are negotiated bilaterally – and the first generator would likely be unwilling to pay for spare capacity to meet future generation capacity requirements in the area – there may be pressure at present for the transmission line not to be constructed with the optimal (spare) capacity. While this has not been a significant issue for TNSPs to date, an increased future reliance on low emission generation technologies may increase the potential for this inefficiency.

One measure that may be considered is for TNSPs to run a public process to ascertain whether there are any other potential generation projects that may wish to contract for the use of the transmission line upfront. This measure could be introduced with little change to the Rules (the main change being to relax the confidentiality requirements on TNSPs).

A second measure that could be considered would be to treat these transmission extension projects as traditional regulated assets, so that the risk of whether future generation use emerges is shared across all customers, in the same manner as augmentations of the shared transmission network. If treatment in this manner was sanctioned by the Rules, it would permit TNSPs to plan and construct the optimal means of connecting a new generator where a number of new generators are reasonably expected. However, given the transfer of risk to customers from this arrangement, it would be important for the TNSP’s planning decisions to be guided by a clear and practicable economic test. This could be achieved by an adjustment to the Regulatory (cost/benefits) Test currently used to assess regulated augmentations of the electricity networks.

In addition, the existing ‘contingent projects’ regime for large and uncertain capital investment in electricity transmission could be expanded to allow assessments of connections for generators and/or deep connection augmentations during the 5-year (minimum) regulatory period of TNSPs. This may be particularly important; as such investment requirements may not have been identified at the time of the transmission owners’ revenue assessment by the Australian Energy Regulator due to the rapid developments in climate change policy since late 2007.

Grid Australia would be happy to discuss further the options for ensuring the efficient development of the transmission network to serve new generators, if this is of interest to the Review.

5. Additional Objective – Promotion of Low Emission Technologies

Lastly, while the National Electricity Objective is focussed squarely on the promotion of economic efficiency, the breadth of the inquiry into the economic efficiency of certain measures is restricted to impacts within the electricity sector. The National Electricity Objective was deliberately designed such that the benefits or costs that may be caused outside of the electricity sector – such as the contribution to climate change and other environmental objectives – would not be taken into account (the policy position being that such externalities would be addressed through economy wide policy interventions, such as an emissions trading scheme).

The Review has suggested that public contributions to electricity transmission investment should be considered. This may suggest a view that, rather than just removing barriers to the connection of remote, low emission generation technologies, that a form of subsidisation of their connection may be appropriate. While Grid Australia does not have a view as to whether such subsidisation may be appropriate, in light of the wider public policy context, the Review should be aware that such a form of subsidisation would be inconsistent with the existing National Electricity Objective. Under these circumstances, a transparent process for providing and monitoring the use of such subsidies would be required.

Grid Australia would also be happy to discuss further its views on these issues, if it is of interest to the Review.

Notwithstanding, the current National Electricity Market policy settings, Grid Australia acknowledges that the potential significance of climate change may require a reassessment of these settings by Government. While this is a matter for Government, Grid Australia is also well placed to contribute constructively to policy proposals focussed on transmission investment.