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Senate Select Committee on Electricity Prices
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Via e-mail: electricityprices.sen@aph.gov.au

Grid Australia submission to Senate Select Committee on Electricity Prices 2012

Grid Australia (GA) welcomes the opportunity to provide a submission to the Senate Select Committee ("the Committee") on Electricity Prices. GA represents the owners of all major electricity transmission networks in the National Electricity Market (NEM) and in Western Australia, and as such, its members have a direct and substantial interest in energy policy initiatives, such as this inquiry, especially matters that impact on high-voltage electricity transmission.

Overview

Australia's economic prosperity, safety and security depend upon access to sufficient and competitive energy sources, which are brought to market through the essential reliability of the transmission network service.

The integrity of the national grid relies on the services of transmission operators. Investment for maintaining transmission network infrastructure is therefore essential to energy security in both a real-time operational sense and in respect of longer term national economic objectives.

Adequate transmission capacity (and so investment) is essential to Australia's economic health. Transmission failures, while extremely rare, cause widespread disruption and loss.

Transmission networks form the backbone of the National Electricity Market (NEM), providing the platform for wholesale electricity competition and extending this competition between states. An appropriate level of transmission capability, together with access for generation, is also key to managing electricity prices by enabling effective competition.

Although infrastructure expenditure on transmission networks account for only around 10 per cent of the average electricity bill for Australian residents and small businesses, Grid Australia understands price increases in recent years have had an impact on household budgets.

That is why Grid Australia is committed to the continued development of an efficient national energy market that gets the balance right between the security and reliability of energy supply and the easing of costs for consumers.

To that end, Grid Australia supports sound regulatory reforms that would:

- give consumers more knowledge and control of their energy usage
- provide the right reliability standards acceptable to consumers
- encourage effective demand side participation initiatives to provide a viable alternative to continually expanding the network to meet peak demand.
- increase the resources and skills of the Australian Energy Regulator
- include a robust review process for investment decisions
- deliver initiatives that can improve consumer energy literacy, advocacy and engagement to create greater transparency across the whole electricity market sector.

Most importantly, regulatory arrangements are currently being considered in detail by multiple review processes that are already well advanced. The industry would encourage the Committee to let these detailed reviews make appropriate recommendations before related policy changes are considered.

About Grid Australia

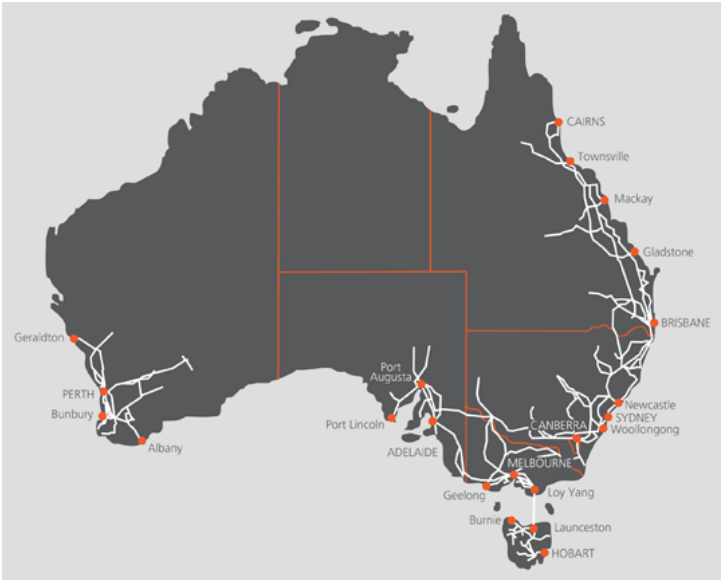
Grid Australia was launched in April 2008. Transmission Network Service Providers (TNSPs) that are members of Grid Australia are:

- ElectraNet Pty Ltd (South Australia);
- Powerlink Queensland (Queensland);
- SP AusNet (Victoria);
- Transend Networks Pty Ltd (Tasmania);
- TransGrid (New South Wales); and
- Western Power (Western Australia).

TNSPs are an integral part of the electricity sector and are responsible for infrastructure including the towers and the high voltage wires, transformers, switching equipment and underground cables. They provide the vital link between electricity generators and the distribution businesses who deal directly with consumers.

The electricity transmission networks of the first five companies are interconnected and form the 'backbone of the NEM'. Collectively, Grid Australia members:

- own and operate more than 47,000 kilometres of high voltage transmission lines;
- have network assets of more than $12 billion.



The role of transmission operators is quite different to companies that connect directly to households. Grid Australia members do not buy or sell electricity - they transport it in bulk.

The revenue required to operate the transmission networks is based on a determination of the cost of providing the service. In the NEM states the revenue cap for TNSPs is determined by the Australian Energy Regulator (AER) in accordance with the revenue and pricing principles contained in the National Electricity Law and the provisions and process contained in the National Electricity Rules.

An 'incentive-based' approach to regulation is adopted, through which TNSPs are encouraged by the prospect of financial reward to become more efficient, with the resulting benefits being shared with customers.

Grid Australia seeks to work closely with the Australian Energy Market Operator (AEMO) and with other NEM institutions to ensure the NEM arrangements can benefit from the capabilities (both present and future) of the interconnected transmission grids.

Electricity Prices *(the following section primarily relates to Terms of Reference 1(a))*

Grid Australia acknowledges the concern about rising electricity prices and welcomes the current debate on this issue. It supports the vision of a truly national and efficient energy market that can help to deliver cost-efficient and sustainable energy services to consumers.

The complexity of the electricity sector and the multi-layered state and national regulatory framework that underpins it has made it difficult to provide consumers with clear and simple answers on the recent price rises.

Grid Australia considers that a better understanding of the whole electricity sector, including customer expectations and the industry's responsibilities and business requirements to provide safe and reliable power, is essential to achieve better outcomes for consumers.

Key causes of electricity price increases over recent years

There are a number of recognised, industry-wide reasons that contribute to rises in electricity costs. These include:

- **Ageing infrastructure** – much of the vital transmission and distribution infrastructure which was built 40 to 50 years ago has reached the end of its life and needs replacing. Costs are also growing due to the higher levels of maintenance needed on the aging network;
- **Increase in demand** – growing prosperity and living standards, a growing population and greater use of energy intensive appliances has put much greater pressure on the network system, requiring upgrading to cope with the demand;
- **Peak demand** – the impact of peak period demand growth is putting even greater pressure on the need for greater infrastructure investment. Air-conditioner use is one of the key examples of changes driving this trend.
- **Reliability** – consumers expect a high degree of reliability. In a number of states electricity operators have an obligation to meet government-mandated reliability standards;
- **External impacts** – the higher cost of borrowing after the GFC and the impact of high commodity prices has placed additional financial burdens on the cost of repairing and replacing essential network infrastructure; and
- **Other factors** – external factors can necessitate network infrastructure upgrades such changes to climate change policies, new bushfire regulations and the introduction of smart meters and grids.

Infrastructure costs make up a much larger proportion of electricity bills in Australia compared to many other countries because of the vast distances to cover.

Household electricity bills

The costs contained in a typical Australian household electricity bill can be broken down into the following categories *(from Commonwealth Treasury figures)*:

- all network charges (transmission and distribution) – around 51 per cent
- wholesale electricity generation costs – around 20 per cent
- carbon price – around 9 per cent, and
- retail, customer service and programs for energy efficiency and renewables - around 20 per cent.

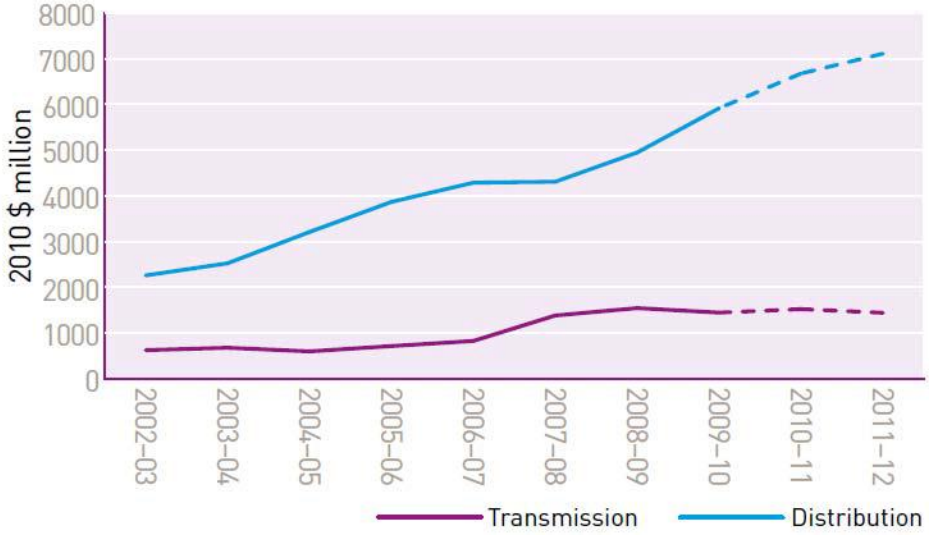
TNSP's impact on prices is modest

Transmission network charges on average account for around only 10 per cent of the whole electricity bill (for a typical household).

While distribution charges currently have a significant impact on prices, the greatest impact on long term electricity prices will be the source of energy generation.

According to the AER's 2011 *State of the Energy Market* report, transmission investment in the NEM on an annual basis totalled around $1.4 billion in 2009/10 and was forecast to plateau around this

level to 2011/12. In comparison, the AER reported that investment amongst distribution operators was expected to rise from around $5 billion in 2009 – 10 to $6 billion in 2011/12. *(See AER graph below).*



Impacts of TNSP Revenue Determinations on residential prices

The AER determines TNSP revenues for periods of typically 5 years, in accordance with the National Electricity Rules (NER). The TNSP revenue proposals are subject to AER assessment and public scrutiny. The AER determines the Maximum Allowable Revenue (MAR) under the 'Building Block' regulatory framework for the upcoming regulatory control period.

The key outcomes of these revenue determinations are capital expenditure, operating expenditure and rate of return allowances, and an overall revenue allowance, *"that will, or is likely to, contribute to the achievement of the national electricity objective"* (National Electricity Law, sections 7 and 16).

Grid Australia notes that the AER has regularly estimated that the price impact of transmission regulatory decisions on consumers is minimal (see *Annexure 1*).

What more can be done to help limit higher prices?

Grid Australia supports the current review processes underway which are focused on delivering better and more efficient outcomes that are in the long term interests of consumers. Reviews of particular interest to Grid Australia are:

- Australian Energy Market Commission's current Transmission Frameworks Review;
- Standing Council on Energy Resources' Review of the Limited Merits Review regime in the energy sector, and
- Productivity Commission Inquiry into whether the current regulatory regime with respect to interconnector investment in the NEM is delivering economically efficient outcomes.

In addition, and of particular importance, the AEMC is currently deliberating on a combined AER and Energy Users Rule Change Committee's Economic Regulation of Network Service Providers Rule change proposals.

Grid Australia considers that the outcomes of these reviews will enable appropriate policy responses to ensure a sound and stable regulatory framework, a strong, accountable and independent regulator and a more transparent market for consumers.

Grid Australia supports:

- the AEMC's proposal to strengthen the role of the National Transmission Planner;
- the AEMC's objective to optimise alignment between generation and transmission investment incentives;
- improved network connection arrangements between generators and transmission operators to facilitate a more competitive market;
- industry and government working together to improve consumer energy literacy;
- improved consumer advocacy and engagement;
- reforms around retail competition, tariffs, demand side incentives and smart meters;
- expanding the network to connect more 'renewable' and low-emission generators to the market.
- greater take-up of smart technology – many electricity customers have not had access to smart meter technology which would enable tariffing strategies that could help to reduce their power bills, directly through managing electricity usage, and indirectly though reduced network augmentation.

Improvements in network planning and regulatory arrangements *(The following section primarily relates to Terms of Reference 1(b).)*

Grid Australia members support an efficient national energy market that is focused on getting the balance right between investment in critical infrastructure to ensure the security and reliability of energy supply, and to create enhanced value for end-consumers.

To this end, Grid Australia supports:

- incremental, but not wholesale, changes to the processes for determining network revenues;
- better resourcing of the independent regulator to assist its economic determinations of transmission investment requirements, supported by a sensible review process;
- transparent, independently set reliability and planning standards that incorporate improved customer engagement processes; and
- planning frameworks that provide greater flexibility to respond to actual demand and provide reliable servicing of different customer needs (e.g. CBD versus more remote locations) in a cost-efficient manner.

Regulation

The regulatory regime in place is the product of more than 15 years of sound policy development involving all of Australia's governments. The Rules target efficient prices and sustainable investment.

They largely get the balance right but Grid Australia supports changes to the Rules where it can be demonstrated there is no threat to supply and a benefit to consumers.

Grid Australia members are currently spending at or below approved forecast expenditure needs for their current regulatory periods. This is consistent with, and responsive to, demand growth that is generally below forecast expectations and has resulted in some cases in deferred expenditure on identified projects.

Grid Australia considers a stable regulatory environment is critical for investor certainty in the NEM and is necessary for efficient infrastructure investment. Investors require confidence in the regulatory regime involving both the initial revenue decision making and decision review processes to protect sunk investment and for the encouragement of new investment.

In that regard, Grid Australia supports:

- incentive based regulation that provides the right drivers for TNSPs to deliver cost effective services; and
- incremental changes to improve the revenue setting process, including provision for improved consumer participation and advocacy. Major changes may not be helpful in the long term interests of consumers.

Grid Australia notes that on 8 February 2012 the AER published a report titled *"Transmission Network Service Providers: Electricity performance report"*. These annual performance reports provide information on the financial and reliability performance of transmission networks managed by the TNSPs. In its media release the AER stated that:

…"capital expenditure was 6 per cent lower in 2009-10 than the previous year, this expenditure still remains at historically high levels primarily reflecting strong investments by TNSPs to meet increasing demand and to replace ageing networks to meet network performance requirements…"

The media release continued:

"…these results show that businesses are continuing to deliver higher service standards and meet demand through improving operations and investing in their networks."

Capital investment certainty & electricity bills

There is a strong relationship between a stable regulatory regime in the transmission sector that promotes investor confidence for capital expenditure and the long-term interests of consumers.

Under-investment in essential or critical infrastructure in transmission networks has the potential to lead to reliability failures that can inflict greater economic and social upheaval than would occur in other parts of the supply chain, such as distribution. In worst-case scenarios it can lead to:

- inefficient generation sourcing which in turn leads to higher wholesale prices;
- the need to urgently undertake large-scale capital projects, with flow-on price spikes throughout the supply chain to consumers; and

- unacceptable risk of catastrophic system failure over time that have major economic ramifications, such as those that have occurred in India (August 2012, affecting over 50 million people), the east coast of the USA (July 2003, leaving more 2 million people without power for a few days) and Auckland (1998, affecting 74,000 people in the CBD who were left without power for five weeks).

Conclusion

TNSPs deliver an essential service to the community and know that rising prices put family budgets under pressure.

Electricity prices are being driven by many market pressures - a fact acknowledged by the AER. Grid Australia considers that additional regulation will not in itself change the real factors that are fuelling higher prices.

Grid Australia supports positive changes that will:

- give consumers more knowledge and control of their energy usage
- provide the right reliability standards acceptable to consumers
- reform pricing policies (for example, Time of Use pricing and removal of the retail price caps, with appropriate support for vulnerable consumers); and
- encourage effective demand side participation initiatives to provide a viable alternative to continually expanding the network to meet peak demand.

Annexure 1

In Powerlink's Final Decision (30 April 2012) at page iv, the AER states that its total (smoothed) MAR of $4,679.1m for the regulatory period 2012/13 to 2016/17 "is expected to have a minimal impact on the transmission component of a typical residential customer's electricity bill". Based on various assumptions, the estimated 'increase in the average residential customer's annual electricity bill of $1,655' is $6 p.a. or 0.4% (pp.6-7).

For the Tasmanian TNSP, Transend, at the time of the handing down (30 April 2009) of its most recent revenue determination for the period 1 July 2009 to 30 June 2014, its total MAR was $962m, which the AER anticipated would add $18 p.a. (or 1.3%) to an average transmission charge for the first year, and approximately $9.50 p.a. for all subsequent years of the regulatory period.

For TransGrid, the NSW TNSP, the AER estimated (that even with a MAR of around $4 billion for the five-year period) this would add *"approximately $2.30 to the average NSW residential customer's annual bill of $983 … Transmission charges represent about six per cent of the average cost of final delivered energy in NSW"*. (AER, Media Release # 6, 30 April 2009).

For the South Australian TNSP, ElectraNet SA, the AER's Final Determination for its regulatory control period 1 July 2008 to 30 June 2013 was released on 30 April 2008. In the accompanying AER media release, it pinpointed that it was determining a MAR of some $1,319m for the period. AER Chair at the time, Mr Steve Edwell, estimated that this would add $9.20 to the average annual residential customer bill.

The first AER revenue decision under the new Chapter 6A of the National Electricity Rules was determined for Victorian TNSP, SP AusNet on 31 January 2008 for the regulatory control period 1 April 2008 to 31 March 2014. This is to align with its Singaporean owners' financial reporting year. With a MAR just shy of $3 billion, the AER said that "In terms of the real price of electricity paid by the average residential customer, the AER estimates that this determination will result in annual increases of approximately 0.88 per cent in 2008-09 and 0.07 per cent per year from 2009-10 to 2013-14".