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Senate Select Committee on Electricity Prices  
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### **Select Committee on Electricity Prices - Submission**

AEMO welcomes the opportunity to provide feedback to the Senate's Select Committee on Electricity Prices. AEMO's submission focuses on the drivers of electricity price increases and network investments as well as options or mechanisms to reduce peak demand.

#### **AEMO's role in Australia's energy markets**

AEMO is an independent not-for-profit organisation that operates the energy markets and systems and also delivers planning advice in eastern and south-eastern Australia.

AEMO has two core operational roles with respect to the electricity market in eastern and southern Australia: power system operator and market operator. These system and market operation functions are largely integrated.

AEMO operates the interconnected eastern and southern Australian power system and AEMO's highest priority as power system and market operator of the National Electricity Market (NEM) is managing power system security. In its role as operator of the NEM, AEMO provides the market with information on supply availability and expected electricity reserve levels over the short to medium term to assist market participants make appropriate business decisions and ensure that customer demand is efficiently and reliably met.

Relating to the gas market, AEMO operates the retail and wholesale gas markets in south-east Australia. AEMO's gas market functions include operating the Victorian gas Declared Transmission System (DTS) and assessing the need for network augmentations.

AEMO has a range of planning roles across the electricity and gas markets.

In Victoria, AEMO is responsible for planning and procuring new transmission capacity and for connecting generators and customers to the electricity transmission network. AEMO prepares independent demand forecasts and justifies expenditure on new transmission infrastructure using an economic cost-benefit framework that strikes a balance between network costs, reliability and market operating benefits. AEMO does not own any assets but procures long-term services under contract.

In South Australia, AEMO produces electricity demand forecasts and provides specific advice to the South Australian Government.

AEMO also holds the National Transmission Planner function across all participating jurisdictions. This role involves the publication of a suite of documents which provide valuable information for stakeholders. The Electricity Statement of Opportunities (ESOO) seeks to both inform participants and potential participants of investment opportunities in the

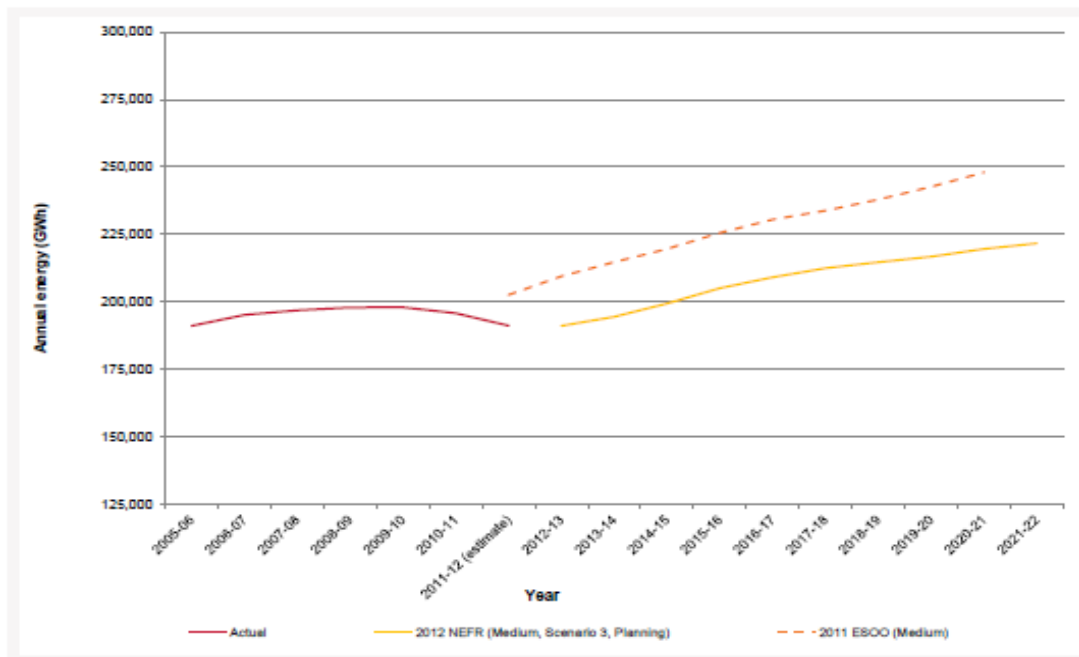
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market and provide independent information about supply reliability in the NEM. AEMO also delivers strategic gas and electricity transmission planning advice to guide long-term investment in network infrastructure and resource management. This includes the National Transmission Network Development Plan (NTNDP), which aims to facilitate the long-term development of an efficient national electricity network that considers potential transmission and generation investments. AEMO also publishes the Gas Statement of Opportunities (GSOO) which investigates supply-side reliability and gas resource information for the gas industry in eastern and south eastern Australia.

### The changing nature of demand

In June 2012, AEMO published the first independent National Electricity Forecasting Report (NEFR) which shows that forecast annual energy sales will decrease while maximum demand growth will continue to increase, but at a slower rate than previously forecast in the 2011 ESOO, see Figure 1 below.

**Figure 1 – Comparison of the 2012 NEFR and 2011 ESOO annual energy forecasts for the NEM**



There are a number of factors influencing this:

- Changes in the economic outlook from previous years with reduced energy forecasts being consistent with a moderation in the growth of gross domestic product (GDP), especially in the short-term.
- Reduced consumption by the manufacturing and mineral processing sectors in response to the high Australian dollar and moderating international demand.
- Significant penetration of rooftop solar photovoltaic systems, where greater uptake by households is expected to offset the mass market energy provided by grid-connected generators.
- Consumer response (commercial and residential) to rising electricity costs and energy efficiency measures.

The changed outlook for electricity consumption in the NEM represents a major change for the industry. Market and regulatory arrangements must be capable of responding to these changes in consumer behaviour and to deliver appropriate price signals to enable efficient investment.

### **The current market framework**

The existing market design has worked well to date, supporting competition and driving efficiency improvement in supply to the wholesale market since commencement. As a result, other than the addition of a price on carbon, the wholesale price of generation has not materially contributed to rising electricity prices over recent years. Considering the areas which have driven these rises suggests that some improvements could be made to the network investment framework. Further, the introduction of a price on carbon suggests that some of the competing Commonwealth and state-based climate change policies, which have also contributed to rising prices, could also be reviewed. AEMO also supports the need for greater involvement of the demand side in the market.

There are a number of market reviews and rule changes underway which are investigating the effectiveness of the existing network planning and investment framework. These include:

- The AER's Rule Change request on Energy Network Regulation.
- The AEMC's Transmission Frameworks Review.
- The AEMC's review on Distribution Reliability Outcomes and Standards.
- The AEMC's Power of Choice – Stage 3 DSP review.
- The Productivity Commission's review on Electricity Network Regulation.

These are being complemented by a number of state-based reviews.

AEMO believes that the above reviews reflect positive steps to enable more efficient development of the market and the associated regulatory regime. It is important that these reviews are finalised and implemented within an appropriate timeframe so that the benefits to customers can be realised as soon as possible.

### **AEMO's response to the Select Committee's terms of reference**

In response to the Senate's terms of reference relating to the drivers of electricity price increases and network investments, as well as options or mechanisms to reduce peak demand, AEMO believes the following areas would enhance the market framework to deliver lower electricity prices for consumers.

#### **Service-focused network development**

The current regulatory arrangements have created an incentive to over-invest in network assets. The impact of this has been exacerbated by reliability standards applied in some states. The growth in capital expenditure over the past five years has therefore outstripped growth in both energy and peak demand and contributed to retail price rises. While some of the expenditure has been necessary to deal with ageing assets it is not clear that all this expenditure is supported by the age of network assets or the growth in demand.

Regulatory arrangements should focus on rewarding businesses for supplying services, focusing on providing returns for valued services and not for the number of assets built. To complement a revenue-setting arrangement that focuses more on rewarding businesses for the services provided, a planning approach which considers the customer's value on the service provided from the network investment would provide a better price-service balance. A

number of alternative reliability planning approaches have been applied across the NEM in an attempt to deliver efficient solutions.

An economic cost-benefit approach to network planning optimises the option selected and investment time while providing the required levels of network security and reliability. It also addresses the forecast price rise before justifying new network investment.

Given the pressure to adapt and develop the network while minimising price rises, it is also important that network planning is complemented by efficient acquisition of network services. The construction, ownership and ongoing provision of network services – including many large network expansions – could potentially be delivered via competitive tendering which will allow for more optimal results to be achieved.

### **Provide for more active participation in the market by customers**

While the current NEM design primarily caters for the supply side of the market, it is generally recognised that it has not yet delivered the level of demand side participation (DSP) that policy makers would have hoped for. The market provides half-hourly price signals which vary with the time of day, day of the week and season of the year. In an efficient, well-functioning market one would hope to see customers respond to these price signals and shift or curtail their consumption during high-priced periods. Customers can also respond to prices by purchasing energy efficient machines and appliances or can install local generation. Medium and large customers have access to time-of-use metering which is one precursor to the optimisation of these opportunities. With the current increase in electricity prices, there is a need for the NEM metering framework to further adapt to meet the evolving requirements of customers.

AEMO supports the work of the AEMC through their Power of Choice review and considers that the consumer should be given more control of their interface to the market and the ability to select their service provider(s) and the services they wish to access. Full contestability of remotely communicated interval metering would act as an enabler of services, as opposed to a barrier, encouraging technology providers to enter the market.

An enhanced metering framework as described above which allows for improved integration of DSP in the wholesale market could also reduce network businesses' capital expenditure programs and place downward pressure on electricity prices. This would, however, require enhancements to network pricing to reflect the cost of network usage at different times.

If you have any questions on this submission, please contact me. AEMO has a range of market and planning information through its unique role in energy markets. Should the Committee require any assistance with the provision of such information please also contact me.

Yours sincerely

David Swift  
**Acting Chief Executive Officer**