Submission

No 8

INQUIRY INTO THE ECONOMICS OF ENERGY GENERATION

Organisation: Australian Energy Market Commission

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AEMC

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Mr Jonathan O'Dea MP
Chair
NSW Parliament Public Accounts Committee
Parliament of New South Wales
Macquarie Street
Sydney NSW 2000

7 February 2012

Our ref: 12-261

Dear Mr O'Dea

AEMC submission: Inquiry into the economics of energy generation

Thank you for your invitation to make a submission to the New South Wales Parliament Public Accounts Committee's inquiry into the economics of energy generation.

The Australian Energy Market Commission (AEMC) is responsible for making and amending the national electricity and gas rules and conducting reviews of the energy markets. The AEMC is an independent, national body responsible to the Council of Australian Governments, through the Standing Council on Energy and Resources (SCER). The SCER is comprised of the energy and resources ministers of each Australian State and Territory.

The Committee's terms of reference are focused on two broad issues relating to energy generation in New South Wales: the mix of energy sources and security of supply. This letter sets out a brief overview of the National Electricity Market (NEM) before commenting on each of these issues.

The National Electricity Market

As New South Wales is a participant in the NEM, generators and retailers operating in New South Wales enjoy the benefits of interconnection with other regions of Australia to both buy and sell energy. The NEM was implemented in 1998 to create a single wholesale market for the supply of electricity to retailers and end-use customers. The NEM is made up of five interconnected regions, New South Wales (which also encompasses the ACT), Queensland, Victoria, South Australia and Tasmania. The regions approximately correspond with the state boundaries.

Interconnections between the five regions allow energy to flow between the states, according to supply and demand conditions. The Australian Energy Market Operator (AEMO) operates the wholesale spot market for electricity that dispatches generators according to the price they offer. These arrangements ensure that energy is sourced from the lowest cost generation across the five regions to meet demand in each state, subject to the limitations of the transmission network across and within regions. Generators and

retailers can use financial products to manage the price and volume risks in the spot market. Provided sufficient economic investment in the transmission network occurs, this means that demand growth in New South Wales could be met from generation investment in South Australia, for example. This approach focuses on the lowest delivered total cost of energy and allows demand to be met at a lower cost than if demand and supply had to be balanced within each state, and also improves reliability of supply.

The AEMC is currently undertaking a Transmission Frameworks Review, a key focus of which is to assess whether the current transmission frameworks are providing an efficient level of investment, particularly in interconnection. Further information on this review is available on our website.[1]

The mix of energy sources in New South Wales

Investment decisions relating to energy generation, including the chosen source of fuel, are influenced by a number of factors. These factors include, but are not limited to: future fuel costs, capital costs, the forecast level of demand for energy, the availability of long term contracts for the purchase of energy, the availability and cost of financing, and the regulatory and policy environment.

Over the next few years significant changes are expected in the likely mix of energy generation across Australia, as the Commonwealth Government's enhanced Renewable Energy Target increases to meet its target for 20% of Australia's electricity supply to be sourced from renewable generation by 2020 and with the commencement of a price on carbon emissions from 1 July 2013. The AEMC has recently published modelling which sets out the potential impact of the enhanced Renewable Energy Target and a price on carbon emissions on energy markets across Australia.[2]

The Commonwealth Government's Clean Energy Future Package also includes a range of incentives to promote increased investment in renewable energy generation. This Package includes a $10 billion investment into the Clean Energy Finance Corporation which will leverage private sector financing for renewable energy and clean technology projects.

Security of supply in New South Wales

The NEM framework sets out a number of mechanisms directed to the ongoing security and reliability of supply of electricity across the interconnected regions.

Energy security in the NEM is managed by the AEMO. AEMO's primary responsibility is to balance the supply and demand of electricity in the NEM's wholesale electricity market, by dispatching the generation necessary to meet demand. AEMO is also responsible for preparing a number of publications to provide information to the market regarding opportunities for investment in generation and transmission assets to ensure forecast future demand for energy is met.

In carrying out its functions AEMO is required to take into account the reliability standard for the market. The reliability standard refers to the maximum expected level of electricity that is at risk of not being supplied to consumers per a financial year. The reliability

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[1] See http://www.aemc.gov.au/Market-Reviews/Open/Transmission-Frameworks-Review.html.
[2] The AEMC's reports on the impact of the enhanced Renewable Energy Target can be found at: http://www.aemc.gov.au/Market-Reviews/Completed/Impact-of-the-enhanced-Renewable-Energy-Target-on-energy-markets.html.

standard reflects the trade-off between the costs to consumers of additional generation and the cost of interruptions due to insufficient generation capacity to meet demand. The current reliability standard is set at 0.002% of unserved energy, which means that demand should be met 99.998% of the time.

The price of energy in the wholesale market is another mechanism that influences investment decisions. Prices offered by generators in seeking to be dispatched by AEMO vary with the balance of supply and demand and other commercial factors. The pattern and duration of price points provides an investment signal for new plant requirements.

In its 2011 Electricity Statement of Opportunities report, AEMO noted that under medium economic growth, NSW would not require additional generation investment until 2018/19 to reliably meet the maximum demand projected for this region.[3]

Yours sincerely

Steven Graham
Chief Executive

[3] Australian Energy Market Operator, *2011 Electricity Statement of Opportunities for the National Electricity Market,* AEMO, 30 August 2011, Melbourne.