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### **2011 National Transmission Network Development Plan: Consultation**

The Energy Supply Association of Australia (esaa) welcomes the opportunity to make a submission to the Australian Energy Market Operator's (AEMO) consultation for the 2011 National Transmission Network Development Plan (NTNDP).

esaa is the peak industry body for the stationary energy sector in Australia and represents the policy positions of the Chief Executives of over 40 electricity and downstream natural gas businesses. These businesses own and operate some \$120 billion in assets, employ over 52,000 people and contribute \$16 billion directly to the nation's Gross Domestic Product.

#### *AEMO's information provision role*

As Australia's premier energy market body, AEMO is an important source of information for a range of stakeholders. The set of documents AEMO produces has grown and now includes, among others, the Electricity Statement of Opportunities, the 2-year Outlook, the Gas Statement of Opportunities and the NTNDP. These documents form a valuable library of resources and inform the views and decisions of existing energy market participants, potential investors, jurisdictional energy regulators, federal and state governments and the wider community.

One of AEMO's roles is the release of information on generation technology costs.<sup>1</sup> Generation cost data produced by AEMO is used widely in the energy sector by industry and regulators and forms an authoritative reference point in a number of contexts, such as regulatory retail price determinations.

Given the wide use of AEMO's generation cost estimates, the energy industry takes an interest in both the actual numbers and the process to develop them. The Association has a number of concerns with the generation cost estimates released as part of the 2011 NTNDP.

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<sup>1</sup> The 2009 version of this data was contained in the *Fuel Resource, New Entry and Generation Costs in the NEM* report produced by ACIL Tasman.

### *Overview of the NTNDP's scenario-based approach*

As with the inaugural 2010 NTNDP, AEMO has decided to use a scenario-based approach for the 2011 NTNDP. Under this approach, the range of investments considered in the NTNDP will be framed by five different scenarios of how the electricity sector could evolve over the next two decades in terms of load growth, generation, investment and retirement. These five scenarios were originally developed as part of the joint AEMO/Department of Resources, Energy and Tourism (DRET) process for the Energy White Paper modelling, and have been modified slightly for the 2011 NTNDP. Notably, as with the 2010 scenarios, AEMO has deliberately not identified any of the scenarios as the most likely or 'base case'.

To underpin the electricity sector modelling of these scenarios, AEMO has also released for consultation a set of generation technology cost estimates developed by Worley Parsons. These revise the set of technology costs developed for the 2010 NTNDP and the Energy White Paper modelling, and include capital costs, operating and maintenance costs and estimates of technical parameters. Fuel cost assumptions have been addressed separately in a report by Intelligent Energy Systems (IES). There are five sets of generation technology estimates, one for each scenario.

### *Challenges with the scenario-based approach*

Given the inherent uncertainties in predicting the future, the Association appreciates the value of a scenario-based approach in exploring a span of different futures, particularly in broader policy work such as the Energy White Paper modelling.

However, with respect to generation technology cost estimates, the scenario-based approach provides a number of challenges, especially given the broader uses of AEMO generation cost data described above. In particular, the fact that the exercise does not produce a 'base case' set of generation cost estimates potentially diminishes the usefulness of AEMO's data as a reference point for the wider energy sector. This may see alternative benchmark datasets developed by other sources.

The Association acknowledges that numbers developed for one purpose by AEMO cannot be expected to meet the requirements of all other uses of that data. However, given the central place of AEMO in the energy community and its historical role in providing this information, esaa considers it important that AEMO is mindful of the wider implications of its approach. As such, to provide clarity to users of AEMO's data, AEMO should note the important limitations in using the NTNDPs numbers for broader purposes. In addition, a possible remedy to this issue that should be explored is the development, through a consultative process, of a 'base case' or 'central' set of generation technology cost estimates. Such an approach would be consistent with the approach in the 2009 generation cost report.

### *Substantial reductions in the 2011 values*

As noted above, 2011 is the second iteration of generation technology cost data produced for the NTNDP series, with the first set for the 2010 NTNDP developed in conjunction with the DRET Energy White Paper exercise.

As highlighted in the Worley Parsons report, there have been substantial changes in some variables between the 2010 and 2011 sets of data. For instance:

- The estimated capital cost of a CCGT plant is initially 25 per cent lower in the 2011 NTNDP than the 2010 NTNDP for Scenarios 1 to 4 and 9 per cent lower for Scenario 5. The differential between the 2010 and 2011 figures changes over the projection period.
- The estimated capital cost of an OCGT plant is initially 24 per cent lower in the 2011 NTNDP than the 2010 NTNDP for Scenarios 1 to 4 and 7 per cent lower for Scenario 5. The differential between the 2010 and 2011 figures changes over the projection period.

Generation costs estimates are notoriously contestable and there is a range of generation cost estimates in the public debate. Further, the Association acknowledges that a 'correct' estimate of generation cost data at a point in time is an impossibility given the individual circumstances of specific projects and changing conditions in capital (physical and financial), labour and materials markets.

However, changes in estimates in the order of 25 per cent are substantial and, given that they relate to technologies that are likely candidates to be built in the market in the short to medium term, raise at least two concerns for the Association.

Firstly, the Association is concerned about the process used to develop the numbers and, in particular, the degree of consultation with industry. The 2010 generation cost estimates were developed by AEMO for the 2010 NTNDP, in conjunction with the Energy White Paper process, which included a stakeholder reference group comprised of industry representatives. This consultative approach was valued by industry and allowed the exercise to benefit from the expertise of a range of market participants. It is of significant concern that the figures developed for 2011 could be so materially altered from those developed for 2010, in the space of one year, without a similar level of engagement with industry. esaa considers that going forward, a greater level of industry engagement is required should figures be altered substantially, particularly in a short space of time.

The second concern relates to the wider use of the data. To the extent that jurisdictional regulators use AEMO's generation technology capital costs as an input into ongoing regulatory processes, such a significant change in the capital costs assumptions could have serious implications for the continuity of modelling which rely on these inputs. For example, a number of state regulators use AEMO's generation technology capital costs data as an input in the determination of regulated retail electricity prices. The changes in capital cost assumptions by Worley Parsons, relative to previous years, could have significant impacts on processes for determining regulated retail prices and this, in-turn, could raise risks about cost recovery across the supply chain.<sup>2</sup>

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<sup>2</sup> It should be noted that the Association does not support regulation of retail prices in markets where contestability is enabled. This position is well documented and will not be raised in relation to the specific matters addresses in this submission.

As such, the Association considers that these capital costs warrant further attention and, at the very least, the NTNDP reporting should contain caveats by AEMO acknowledging that they are a significant break in the series compared to previous data.

Any questions about our submission should be addressed to Kieran Donoghue, by email to [kieran.donoghue@esaa.com.au](mailto:kieran.donoghue@esaa.com.au) or by telephone on (03) 9670 0188.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Brad Page', with a stylized flourish at the end.

**Brad Page**  
Chief Executive Officer