



17 March 2021

Ms Nicola Falcon
General Manager Forecasting
Australian Energy Market Operator
PO Box 2008
Melbourne, Victoria, 3001

Dear Ms Falcon

RE: Inputs, Assumptions and Scenarios Report – revised scenario consultation

Shell Energy Australia Pty Ltd (Shell Energy) welcomes the opportunity to respond to the Australian Energy Market Operator's (AEMO) Inputs, Assumptions and Scenarios Report revised scenario consultation.

About Shell Energy in Australia

Shell Energy is Australia's largest dedicated supplier of business electricity. We deliver business energy solutions and innovation across a portfolio of gas, electricity, environmental products and energy productivity for commercial and industrial customers. The second largest electricity provider to commercial and industrial businesses in Australia¹, we offer integrated solutions and market-leading² customer satisfaction, built on industry expertise and personalised relationships. We also operate 662 megawatts of gas-fired peaking power stations in Western Australia and Queensland, supporting the transition to renewables, and are currently developing the 120 megawatt Gangarri solar energy development in Queensland. Shell Energy Australia Pty Ltd and its subsidiaries trade as Shell Energy.

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General comments

Shell Energy is pleased to have the chance to provide further comments on AEMO's proposed modified scenarios for consideration as part of the Inputs, Assumptions and Scenarios report that underpins AEMO's modelling for the Integrated System Plan (ISP) and Electricity Statement of Opportunities (ESOO).

Shell Energy considers there are three important issues that AEMO should consider. Firstly, the current Sustainable Growth and Export Superpower scenarios and the proposed new Rapid Decarbonisation sensitivity are all coupled with high rates of economic and population growth suggesting growth in electricity usage is underpinned by a booming economy. We recommend these scenarios should also be tested with one where a possibility of a lower growth in the economy and population prevails. While this is obviously an unpalatable scenario – economic growth coupled with high decarbonisation would be far preferable – we consider it to be a sensitivity worth testing.

Secondly, we also recommend that when assessing the prospect of a hydrogen export market developing in Australia as part of the Export Superpower scenario, AEMO must also consider the possibility that some H2 electrolyzers may be commissioned outside the current NEM grid infrastructure as stand-alone projects.

¹ By load, based on Shell Energy analysis of publicly available data

² Utility Market Intelligence (UMI) survey of large commercial and industrial electricity customers of major electricity retailers, including ERM Power (now known as Shell Energy) by independent research company NTF Group in 2011-2020.



We agree that it is well worth exploring the impacts that significant hydrogen production could have on electricity demand in the NEM. However, we believe a balanced approach must be taken, acknowledging that not all of this development will take place inside of the NEM or connect to NEM infrastructure if physically located in a NEM region. As an aside, AEMO should make it clear that this scenario is actually an *Energy Export Superpower* as this is what it is referring to rather than a broadly far stronger export sector in Australia.

Thirdly, when considering AEMO's proposal to include both a Central - Current Trajectory and Central - Net Zero 2050, we question the need for both and consider the Central - Net Zero 2050 scenario adequately reflects the ambitions of the respective State and Federal Governments as well as announcements from a wide range of company's indicating Net Zero 2050 targets. We are concerned that having two Central scenarios as planned may lead to confusion as to what the "central" scenario is and fails to meet the Australian Energy Regulator's (AER) best forecasting and cost benefit analysis practice of there being a "Central" scenario, or the most likely outcome, against which other options can be assessed and weighted. We also question how the Central - Net Zero 2050 scenario would be achieved absent some level of hydrogen industry development for internal use and recommend AEMO consider this as a sensitivity case.

Also, when considering the proposed Central - Net Zero 2050 scenario, we note that AEMO has proposed the use of a single linear trajectory for yearly emissions reduction targets between 2030 and 2050. It is unclear to Shell Energy that a linear trajectory is the most likely outcome and believe that AEMO should consider the potential for other plausible trajectories. For example, AEMO could consider an exponential trajectory to meet the 2050 target or a combination of 5-year trajectory paths with increasing yearly emissions reduction targets in each of these trajectory paths.

AEMO's decision to replace the diversified technology scenario is an interesting one. We note the feedback that AEMO has received from a range of participants - market participants, consumer groups and environmental groups - both for and against its inclusion. Shell Energy considers it a scenario that was and remains worth investigating as it combined the scope for new technologies, constraints within the distribution network impacting the roll out of distributed energy resources and other plausible issues alongside low gas prices. While a low gas price sensitivity explores the potential impacts of lower gas prices, it focusses solely on gas prices rather than a more comprehensive scenario involving technological and other plausible changes. We still consider that the Diversified Technology scenario provides a useful "bookend" scenario along with the other similarly plausible "bookend" scenarios retained and proposed by AEMO.

Prior to developing the Final ISAR, we believe it would be beneficial for AEMO to formally re-engage with stakeholders to improve the clarity of the scenarios and sensitivities which AEMO intends to move forward with. This would include more detail regarding the differences between 'scenarios', 'sensitivities' and 'other risks to be tested'. It would be helpful for stakeholders if AEMO could further explain how 'sensitivities' and 'other risks to be tested' will be used in the ISP and by TNSPs in the RIT-T, such as moving low gas prices from a scenario to a sensitivity would appear to prevent TNSPs placing any weight on this outcome in the RIT-T process.

In addition, we note that AEMO has yet to consult on the methodology to be applied to determine the weighting of scenarios, and potentially their respective sensitivities as required by the AER Guidelines. Similar to the above, we recommend that AEMO commence engagement with stakeholders on this issue well before finalising the Final ISAR.

AEMO has listed a range of scenario sensitivities proposed by stakeholders. Shell Energy believes that there are several that warrant further consideration. The higher transmission cost sensitivity proposed by Delta Electricity and the ISP Consumer Panel is one that we consider will have great benefit as it is likely to better reflect the realities of the costs of large transmission projects. There are a number of examples over the past few years of transmission projects suddenly facing large cost increases when seeking AER regulated funding approval above what was originally proposed and approved under the Regulatory Investment Test - Transmission (RIT-T).



Project EnergyConnect is one such example where the cost has blown out by 60% from an originally estimated \$1.5 billion, to \$2.4 billion.

Our understanding is that AEMO generally uses the midpoint of cost estimates from the cost-benefit analysis for the ISP. However, as noted, historically final contingency project approval applications are routinely above or at the high end of costs used in the ISP, not the midpoint. As such, we support AEMO's efforts to improve its cost estimates for transmission projects. As part of this, we consider that a sensitivity should be used that increases estimated transmission project costs to the high point of AEMO's projected cost outcome and potentially 20% above that level to reflect the uncertainty of costs of large transmission projects in order to better understand the impact of higher cost on the cost benefit of the proposed large and high-cost transmission projects.

As previously noted, we consider that the low-growth and high decarbonisation scenario merits inclusion. It would seem reasonable to include Energy Australia's proposed load closures sensitivity based on transparent economic criteria as part of this as it would largely reflect the same drivers.

Finally, we agree that the ISP Consumer Panel's proposed decentralised future driven by reduce costs for distributed energy resources (DER) and new policies is also worth including. In this case, the sensitivity analysis should also consider and quantify the potential level of investment in the distribution network that may be required to facilitate such an outcome.

Shell Energy seeks clarification on AEMO's indication that the Central-Current Trajectory scenario will have "limited guidance from multi-sectoral modelling outputs". We request that AEMO provide more detail on what limited guidance means in practice. In general, we would expect that multi-sectoral modelling would provide a more material level of influence than what AEMO appears to be suggesting here.

Please contact Ron Logan 0427 002 956 or ron.logan@shellenergy.com.au if you have any questions with regards to this submission.

Yours sincerely

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