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2019 Planning and Forecasting Consultation paper

AGL Energy (**AGL**) welcomes the opportunity to comment on the Australian Energy Market Operator (**AEMO**) 2019 Planning and Forecasting Consultation Paper.

AGL is one of Australia's leading integrated energy companies and the largest ASX listed owner, operator, and developer of renewable generation. Our diverse power generation portfolio includes base, peaking and intermediate generation plants, spread across traditional thermal generation as well as renewable sources. AGL is also a significant retailer of energy and provides energy solutions to over 3.6 million customers in New South Wales, Victoria, Queensland, Western Australia, and South Australia.

AGL's responses below will aim to answer the specific consultation questions presented to stakeholders. AGL's views strongly align with other industry perspectives that were raised during the AEMO stakeholder briefing and scenario workshop on 19 February 2019.

Engagement

Question 1. How could AEMO further improve stakeholder engagement and confidence in the results of the 2019-2020 ISP and 2019 ESOO?

AGL supports AEMO's intentions to strengthen stakeholder engagement through the 2019-20 Integrated System Plan (**ISP**) and 2019 Electricity Statement of Opportunities (**ESOO**).

Alongside the 2018 ISP, AEMO published consultant reports that explained how AEMO's existing dataset on generation was updated. While this information was helpful, AGL considers there to be a greater opportunity for AEMO to use information provided by generators to inform these assumptions around cost and generator decision making, thereby producing higher levels of accuracy in their results. For example, the National Electricity Rules (NER), already require generators to provide a series of datasets and information to AEMO for its 'generator information page'. AGL suggests there is scope to build on this, with generators providing additional information on an individual and confidential basis depending on the inputs and specifications of AEMO's modelling and analysis.

AGL also encourages AEMO to consider reintroducing the NEM wholesale consultative forum (**NEMWCF**), which has not been held since September 2018, or a similar forum at which AEMO can disseminate information. While AEMO has continued to run smaller technical working groups, the broader NEMWCF has value as it is attended by a broader range of specialists and enables holistic discussion on related topics which may not otherwise be considered. This audience also needs to be made aware of and be given the opportunity to comment on network level reform that directly impacts wholesale market outcomes, allowing stakeholders to be brought on the journey and not just presented with results.

Scenarios

Question 2. Do you agree that proposed scenarios outlined in this section provide plausible and internally consistent future worlds for use in planning and forecasting publications? Do they provide enough stretch for forecasting and planning purposes? How could they be improved?

Question 3. What additional sensitivities should be explored in the 2019-20 ISP or 2019 ESOO, that could materially impact power system planning?

The scenarios presented by AEMO seem somewhat limited in their ability to capture the complexity of the future operation of the National Electricity Market (**NEM**). The linear nature of the outlined scenarios presents a simplistic view of 'future worlds' and could therefore be expanded to include more variability as exists in the real world, one way to do this would be to include greater sensitivities into the analysis.

AGL would like to encourage the inclusion of a wider range of state-based projections. Currently the modelling includes the LRET of 33,000GWh, the VRET of 25% and the QRET of 50%.

The current set of scenarios have little relationship with the other state's current legislation, policies or position in terms of their individual renewable energy targets.

State specific trajectories and other government policies will significantly influence the NEM and will materially impact power system planning, as we have seen in South Australia. Therefore, AGL would suggest including a larger range of specific state-based sensitivities into the scenarios.

AGL respects that AEMO is taking a more 'policy agnostic' approach this year, where concerns over increasing Distributed Energy Resources (**DER**) penetration and thermal plant retirement timelines have been presented as more relevant and fundamental to the challenges we face today. However, AGL questions this assumption that DER and thermal plant retirements should be given such a prominent focus in the ISP. Other challenges such as electric vehicles (**EVs**), electrification of the transport industry and the NEM's move to a five-minute settlement market seem to be left out of the ISP entirely but will contribute greatly to future demand and supply forecasting.

AGL would encourage the inclusion of EV uptake trajectories and five-minute market settlement to be incorporated into the model.

Inputs and Assumptions

Question 4. Do the proposed inputs and assumptions provide a reasonable basis for assessing the value and direction of the future energy market transition? If not, please provide suggestions for improvement, particularly regarding consumer embedded investments, large scale generation technologies, and network and non-network options to support Australia's future energy system.

The modelling and assumptions assess generator closures based on revenue sufficiency and that economic plant retirement will occur. AGL highlights that several factors impact plant closure decision making, including but not limited to technical end of life, economic viability, fuel availability, jurisdictional retailer of last resort obligations, and the effects of contract markets. Government intervention in the market is also impacting generators operational capabilities. Accordingly, a simple measure of economic retirement does not present an accurate picture.

In addition, there needs to be greater emphasis on a portfolio approach to such assessments. Most participants operate a portfolio of assets, and utilise these assets on a portfolio basis, rather than as standalone generators. A single generator does not rise and fall on its own limited economics, but on how it fits into a participant's book.

New builds are treated differently to retirements by the ISP. These scenarios appear to be assessed based on policy shifts that are favourable to the uptake of particular technologies. That is, the consultation paper assumes that appropriate policy settings will be in place to achieve emission reductions and reliability aims, and possibly provide additional required revenue for new builds.

In AGL's view, this assumption is reasonable to make regarding emissions, however it could result in a non-technology neutral analysis by AEMO regarding reliability. For example, assuming subsidies will be in place for centrally controlled residential batteries, this would be considered more favourably by the ISP than alternative policy options. AGL would like to see more transparency in the modelling and assumptions about how plant closure and new build decisions fit in, and details of the assumptions being made around government policies that would be required to support new build generation. In addition, AGL is interested to see transparency around the expected revenues being used to justify new builds.

The Australian Energy Regulator's (**AER**) decision on Project EnergyConnect, the SA-NSW interconnector is expected in mid-2019, with the final step in ElectraNet's Regulatory Investment Test - Transmission (RIT-T) process having been completed in February 2019. The 2018 ISP's role in advocating for this project is just one example of the ISP successfully influencing policy makers to drive transmission reform. It's arguable that the ISP is having more impact than its predecessor, the National Transmission Network Development Plan.

Given the ISP's significant influence, it would be useful for AEMO to assess ISP outcomes against the outcomes of other, intersecting reforms. For example, the Retailer Reliability Obligation (**RRO**), and particularly the Market Liquidity Obligation (**MLO**), are directly impacted by construction of the SA-NSW interconnector.

The SA-NSW interconnector has partly been put forward on the basis that cheaper, coal-fired power can be imported into SA from NSW, thereby reducing the necessity of having dispatchable generation located within SA. However, we know the RRO will require retailers to hold contracts or invest directly in dispatchable energy to meet demand, meaning that some level of dispatchable energy will still be required in SA. The RRO will impose this even though the interconnector is contrary to the policy goals of improving liquidity and contracting under certain circumstances. It could result in generators receiving insufficient return on dispatchable generation it is required to build.

Also critical for consideration is the impact of these transmission developments and new wholesale market obligations on contract markets. Commercial implications must be considered for AEMO's modelling and assumptions to form an appropriate basis for the ISP and/or ESOO. For example, drawing on the interconnector and RRO scenario, AEMO's modelling needs to consider how customer load can be hedged

in a scenario where there are low volumes of in-region dispatchable generation, and the implications for cap contract revenues. In short, where there is potential for, or an actuality of ISP recommendations being incompatible with concurrent reforms, the inputs and assumptions should take account of this wider landscape.

Question 5. Do you have any other feedback on AEMO's proposed inputs and assumptions?

AGL has identified errors in the 2019 Inputs and Assumptions Workbook regarding some of its generation assets. We will provide specific details of this directly to AEMO.

In terms of broader feedback, AGL agrees with the views expressed by other stakeholders during the 19 February session that limitations and constraints to the modelling should be well articulated by AEMO, so that there is transparency through clear upfront communication with respect to the modelling. This will help further analysis of the results, with proper data limitations expressed and understood.

Material issues for 2019

Question 7. What mitigation option could be considered to increase grid resilience, and how should these options be evaluated? Is AEMO's proposed approach reasonable?

Transparency around network limitations is useful and can drive positive outcomes for future development. However, as AEMO continues to build a picture of the NEM based on ongoing modelling, participants are not privy to this same information. We consider there is scope to improve transparency around network modelling and the connections process, with the goal of suring up grid resilience where necessary.

Finally, energy services must be appropriately valued by the market, considering their scarcity, and noting that this will continue to shift as traditional generation exits the market. Consideration should be given to the development of markets for primary frequency control like fast frequency response, and inertia. Contracting these services will generate the appropriate market investment signals for ancillary services that assist with grid resilience and stability.

Thank you for the opportunity to comment on this important foundational work. If you have any queries about this submission, please contact Liz Gharghori on (03) 8633 6723 or LGharghori@agl.com.au.

Yours sincerely,

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