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Integrated System Plan Consultation

AGL Energy (**AGL**) welcomes the opportunity to provide an initial submission to the Australian Energy Market Operator's (**AEMO**) Integrated System Plan (**ISP**) consultation.

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, providing energy solutions to over 3.7 million customers throughout eastern Australia.

In addition, AGL is continually innovating our suite of distributed energy services and solutions for customers of all sizes (residential, business and networks). These behind the meter energy solutions involve new and emerging technologies such as energy storage, electric vehicles, solar PV systems, digital meters, and home energy management services delivered through digital applications.

AGL supports initiatives that lead to more efficient network investment outcomes. We believe that a coordinated, national approach to planning for Australia's energy transformation is critical to delivering the best long-term outcome for consumers. This is particularly important given rapid technological structural change, the range of potential developments across the National Electricity Market (**NEM**), and the interdependencies between them.

National approach to network planning

The National Transmission Network Development Plan (**NTNDP**), as developed by AEMO in consultation with industry, has over recent years provided a useful view of the development of the NEM transmission system over an extended planning horizon. We support the continuation of this function by AEMO, and the integration of the NTNDP into the proposed ISP, with a particular focus on the development of Renewable Energy Zones (**REZ**) as recommended by the Finkel Blueprint¹.

¹ Commonwealth of Australia, *Independent Review into the Future Security of the National Electricity Market: Blueprint for the Future*, July 2017



AEMO's 2016 NTNDP highlighted a number of issues regarding transmission planning that we believe are still relevant in the development of an ISP. In the 2016 NTNDP², AEMO stated that the transmission planning framework needed to adapt on the basis that:

- State and federal emissions reduction targets, as well as consumer sentiment, are projected to drive a transformation of the energy generation mix;
- Transmission networks, designed for transporting energy from coal generation centres, will need to transform to support large-scale generation development in new areas; and
- Transmission networks will increasingly be needed for system support services, such as frequency and voltage support, to maintain a reliable supply.

On this basis, AEMO concluded that a more interconnected NEM could lower overall costs and improve system resilience. We agree with the principles behind this conclusion, and support further analysis on the potential benefits of increased interconnection and the associated generation that could be unlocked through transmission connection to establish REZs. However, we note that care must be taken in making any recommendations on the need for significant additional investment into grid infrastructure.

The challenge of interconnectedness

New technologies, flattening electricity demand, and policy uncertainty regarding emissions reductions and reliability obligations makes the assessment of interconnection challenging. Interconnectors and transmission assets are costly and have long lives, and an investment that is considered efficient may be rendered inefficient when the market environment changes. It is therefore appropriate that proposed investments in such assets are assessed comprehensively to avoid locking in long term costs in the Regulatory Asset Base (**RAB**) of transmission network service providers (**TNSP**), to address issues that may be short term in nature or otherwise solved by more efficient market solutions. Despite the efficiencies that could be delivered by network investment, we consider that it is still important to objectively evaluate proposed transmission infrastructure investment against other credible network or non-network alternatives such as local generation, storage or demand management, and other new emerging technologies.

Under the present Regulatory Investment Test for Transmission (**RIT-T**) arrangements, any investment (that will be paid for by consumers on a regulated basis) must be robust and provide a positive net benefit in the majority of future scenarios considered. The NEM is undergoing significant energy and technological innovation in a context of ongoing policy uncertainty, which makes the outlook for any energy investment increasingly risky. At the same time, investment in low-emissions generation on a broad scale is required to meet Australia's international commitments to reducing emissions, and there is an imperative to ensure that generation operates as efficiently as possible in a national framework.

We therefore support the development of an ISP to act as a basis for identifying potential investment in new transmission assets and identifying potentially useful generation sites. However, we believe it is critical that investment in transmission assets remains governed by an effective RIT-T³, and that investment in generation assets remains driven by appropriate price signals in a competitive market.

² <http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Planning-and-forecasting/National-Transmission-Network-Development-Plan>

³ We note that there was a 2017 Rule Change regarding competition in transmission and that the RIT-T will be further reviewed in 2018 by the AER

Accounting for investment risk

Transmission projects are currently without risk for investors, while competing generation projects must factor risk into the pricing of any generation investments. The inefficient expansion of the transmission network can reduce the feasibility of some generation and in the long run, this substitution can lead to closures of generation that may be more efficient or enhance power security when compared to the network investment.

Transmission investment should not necessarily be implemented to drive generation development, but rather should be considered in parallel by demand for energy and new projects. Development of transmission assets typically involve forecasts of new generation over a long period of time. While a high threshold of future generation requirements can occasionally lead to a lack of progress in some network investments and occasional short-term constraints, this may be preferable to spending significant capital and committing long term network expenditure and significant cost to customers that is subsequently under-utilised. In this regard, great care needs to be taken in claiming benefits of new transmission assets without commensurate commitments to new generation build that will efficiently utilise that asset at lowest cost.

Robust probabilistic scenario planning is therefore critical in determining proposed transmission investment. While the ISP can provide a basis for initial assessment of new transmission investment proposals, it should not intrude on improvements to the RIT-T that would require TNSPs to have greater regard to the changing dynamics of the NEM in developing efficient proposals for investment and augmentation.

With this in mind, we consider that the proposed scenarios and modelling for the ISP is reasonable in highlighting potential investment opportunities, and we support the publication of the document, which will be useful to inform further discussion regarding efficient investment in the NEM. Nevertheless, the drivers of new generation build will continue to be wholesale market price signals and settings that are exposed to investment risk. Any modelling for the ISP should take great care in promoting the viability of generation and potential REZ development sites without considering the long-term viability of that investment with regard to projections of demand, policy uncertainty, and the longer-term energy market transformation.

The test for investment in transmission assets should fundamentally remain a detailed case-by-case assessment of projected investments under a revised and improved RIT-T process, which further considers the value of new investment for customers against the risks of inefficiencies and under-utilisation that come at significant cost over long periods of time.

If you have any questions regarding this submission, please feel free to contact Aleks Smits, Manager Policy and Research, on 03 8633 7146 or myself on 03 8633 6836.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Stephanie Bashir', written in a cursive style.

Stephanie Bashir

Senior Director, Public Policy