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AGL Response to AEMO's draft Integrated System Plan 2022

AGL Energy (**AGL**) welcomes the opportunity to comment on the Australian Energy Market Operator's (**AEMO**) draft Integrated System Plan (**ISP**).

AGL is a leading integrated essential service provider, with a proud 184-year history of innovation and a passionate belief in progress – human and technological. We deliver 4.2 million gas, electricity, and telecommunications services to our residential, small, and large business, and wholesale customers across Australia. We operate Australia's largest electricity generation portfolio, with an operated generation capacity of 11,208 MW, which accounts for approximately 20% of the total generation capacity within Australia's National Electricity Market (**NEM**).

Scenarios

The aim of the ISP is to provide a roadmap for the efficient development of transmission for the NEM over the next 20+ years, with the primary output of the ISP being the identification of actionable ISP projects (network or non-network related) that are required to deliver the most cost-efficient investment pathway under a range of scenarios. The weightings given to each ISP scenario represent the relative likelihood of that scenario eventuating. These weightings are used to identify the optimal development path and subsequent network projects through a long-term expansion model, while meeting the constraints from the input assumptions.

While the scenarios included in the draft ISP are representative of a range of future possibilities, the final weightings do not reflect likelihood of the scenarios materialising under current market and policy settings. While the 'Step Change' scenario represents a positive ambition for the NEM, under current market settings and stated government policies, it is very challenging to envisage this scenario as the most likely pathway for the NEM. Alternately, the 'Progressive Change' scenario (previously 'Net Zero 2050') seems more closely aligned with the current state of the market than the 29% likelihood given to this scenario by AEMO.

Weightings of the ISP scenarios should be based on real inputs and assumptions that are credible under current market settings, rather than forecasts to meet other objectives. It is presumptive to assign relatively high weightings to scenarios that do not align with current government policies (or the announced policies of potential future governments) or market data, either with respect to price, reliability, type of generation, or emissions trajectories. Even in the circumstances in which proposed emission trajectories were to match those set out in the 'Step Change' scenario, the necessary changes in policy at a federal and state level would be of such a scale across all parts of the economy that there are real questions as to whether the lead times for such adjustments would actually be capable of being met as per the chosen scenario. For example, the closure dates that AEMO has

put forward in the ISP are predicated on the grid having the necessary capabilities underpinned by a quantum of investment that would be challenging in the proposed timeframes and brings into question the use of the 'Step Change' scenario as the base case.

AGL strongly supports the need for an aspirational scenario that considers potential pathways towards reducing emissions in a more ambitious timeframe than Australia's current climate commitments. However, we do not consider that this scenario at present represents the most likely development pathway for the ISP. We suggest increasing the weighting of the 'Progressive Change' scenario and decreasing the weighting of the 'Step Change' scenario.

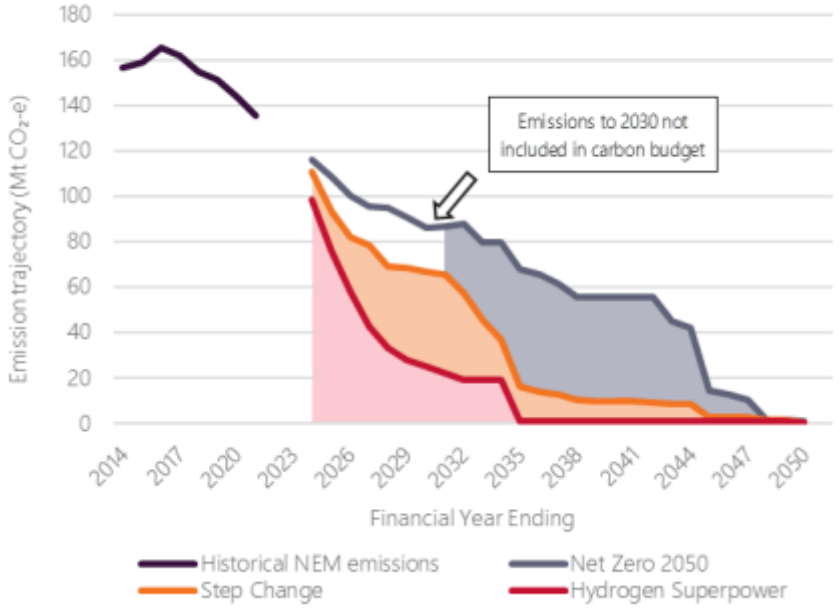
Australia's Carbon Commitment

The carbon trajectory used as the basis for the 'Step Change' scenario is not reflective of current policy commitments or economic rationale; rather, it is a trajectory that has been constructed to represent a step change in emission policy for the purposes of the ISP.[1] Given that the carbon budget input assumptions are not based on actual legislated policy in Australia or Australia's Nationally Determined Contributions (**NDC**) under the Paris Agreement, it is unclear why this scenario has a 50% likelihood and is considered most probable.

In the 2021 update to Australia's NDC, Australia reaffirmed its emissions reduction target of 26-28 per cent below 2005 levels by 2030 (implemented as an emissions budget covering the period 2021-2030) and made a further commitment to net zero by 2050. This carbon trajectory is reflected in the 'Progressive Change' (previously 'Net Zero 2050') scenario included in the ISP and depicted in figure 5 from the 2021 Inputs, Assumptions, and Scenarios Report below. The Step Change and Hydrogen Superpower scenarios in contrast are based on cumulative carbon budgets from 2024 which are not backed by existing emissions reduction commitments.[2]

[1] Climate Works Multi-Sector energy modelling July 2021
[2] AEMO 2021 Inputs Assumptions and Scenarios Report July 2021

Figure 5 NEM emission trajectories from multi-sectoral modelling and the resulting cumulative carbon budgets



Cumulative carbon budget (Mt CO_2-e)	
Slow Change	NA
Steady Progress	
Net Zero 2050	932
Step Change	891
Hydrogen Superpower	453

Only the Progressive Change scenario uses multi-sectoral modelling to determine a carbon budget for 2031-50. Before 2031, the 'Progressive Change' scenario has been designed such that the emissions over the period to 2030 must meet, or fall below, the Federal Government's 2030 target.

In contrast, the Step Change scenario includes a steep decrease in emissions between 2023 and 2030 that is not based on current domestic climate policies. AEMO states that the Step Change Scenario modelling indicates 14GW of coal generation is likely to withdraw by 2030 to meet tighter carbon budgets. However, as these carbon budgets have not yet been prescribed, and the forecast relates to just the next eight years, rather than a distant period which is harder to predict, we do not consider this to be the most likely future scenario.

We suggest that where an input assumption underpins a certain scenario that is not based on legislated policy, AEMO should articulate how this trajectory would be supported by the market in the absence of government policy drivers. We also suggest the Delphi Process should be followed by a sense check to assess whether the outcome is factually well supported.

AGL values the ISP as a whole of system plan that is essential for planning network development. Transparent communication around the likely scale and timing of investment needs, and the impact on both consumers and industry, must be a key goal of the ISP. However, the ISP does not plan generation investment and retirement, which (other than through direct government action) is market driven. The ISP is also not a forecasting document, but rather a plan that relies on real inputs. We encourage AEMO to ensure these distinctions are clear when framing the ISP to ensure that heavily-weighted scenarios reflect credible pathways based on current market conditions, risks, constraints and transitional milestones. We would continue to caution against specific details in certain scenarios being overemphasised as likely outcomes for the market.

If you have any queries about this submission, please contact Chris Streets at cstreets@agl.com.au.

Yours sincerely,

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