Integrated System Plan Consultation
ISP@aemo.com.au

Dr Rob Passey
Australian PV Institute
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Response to the Modelling Assumptions in the Integrated System Plan Consultation Report

We commend the Australian Energy Market Operator for its initiative in undertaking the Integrated System Plan Consultation, and are grateful for the opportunity to respond. We apologise for the lateness of this submission, and hope that nonetheless it can be incorporated into the consultation process.

This submission responds only to Question 1.1 and Appendix A regarding the modelling assumptions.

The Australian PV Institute (APVI) represents over 80 local industry, manufacturers, researchers and stakeholders across the PV value chain, in their efforts to accelerate the deployment of PV safely and cost-effectively. It undertakes background research and policy analysis for the sector to ensure that accurate information is available, standards are in place and potential issues are investigated before they become problems.

About the Integrated Plan

1.1 The scenarios the modelling will use to inform the ISP are outlined in Section 1.4. Recognising the time limitations to produce the first ISP in mid-2018, are these scenarios suitable to address these questions at a high level? Should the scenarios be expanded in more detailed analysis for future ISPs?

The rationale behind the choice of settings in the three scenarios (Neutral, Slow change and Fast change) is unclear. If the scenarios are based on the rate of technology change, then in the Fast change scenario the 'Large-scale demand side participation and distributed storage aggregation' should be Strong, but is currently set at Weak. Also see our comments below on the take-up and costs of small-scale PV and batteries.

Given that the value of 'bookend' scenarios in this study is to investigate settings that could lead to high or low levels of development of Renewable Energy Zones (REZs), and subsequent need for transmission infrastructure, it may be better to use settings that emphasise these outcomes. Thus, increased need for REZs would have the same settings as in the Fast change scenario, except that rooftop PV, batteries and energy efficiency would be Weak, as would the small-scale PV and distributed battery costs. Conversely, the Slow change scenario would have the same settings except that rooftop PV, batteries and energy efficiency would be Strong, as would the small-scale PV and distributed battery costs. This would change the scenarios from representing different rates of technological change to representing the need for REZs.

It is also not clear why in the current scenarios both rooftop PV and battery storage are set at Neutral for all three scenarios – when in Appendix A there are a number of different scenarios for

both these technologies. Similarly, it is not clear why the costs for grid-scale storage, small-scale PV and distributed batteries are all set at Neutral for all three scenarios.

Appendix A

The scenarios for uptake of rooftop PV are quite similar. We recommend a higher Strong rooftop PV scenario, if not in the main bookend scenarios then in the sensitivity analysis.

The PV build cost is too high for 2017-18. According to Solar Choice it is currently about $1.30/W for up to 10kW, about $1.15/W for 10kW to 100kW.[1] Based on our industry experience the installed cost of Large-scale PV is currently about $1.40/W. We recommend the use of lower starting points then the same rate of decline.

It is likely that the greatest step changes in demand will be due to industrial processes (smelting, LNG etc), so presumably these have been incorporated. Will these be made available once the more detailed assumptions are released when the feedback to the high level assumptions has been incorporated?

Yours Faithfully,

Dr Rob Passey
Australian PV Institute

www.apvi.org.au

About the APVI

The Australian PV Institute is a not-for-profit, member-based organisation, which focuses on data analysis, independent and balanced information, and collaborative research, both nationally and internationally. Our objective is to support the increased development and use of PV via research, analysis and information.

[1] https://www.solarchoice.net.au/blog/solar-power-system-prices