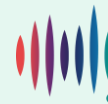


Improving consideration of demand-side factors in the ISP

Submission to the Australian Energy
Market Commission's Consultation Paper

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Summary of recommendations

Energy Consumers Australia (ECA) broadly supports the draft determination on improving consideration of demand-side factors in the ISP. While it is a move in the right direction, we think that it does not go far enough to improve the ISP as a whole-of-system analysis.

The draft determination will not result in a more comprehensive analysis of the trade-offs between investment at the distribution and the transmission level (e.g., through co-optimisation), and it therefore won't completely represent the most comprehensive planning outcome.

The draft determination states that AEMO may undertake a more comprehensive analysis in the future when data collection and modelling capabilities allow. ECA believes that more should be done in the near future to enable the ISP and DNSPs to undertake more comprehensive data collection, analysis, and planning in the longer term, such as requiring AEMO to develop a prospective roadmap for how it will achieve the data collection and modelling capabilities required.

We support the Energy Efficiency Council's initial submission recommendation that AEMO should be required to develop a statement of opportunities.

We do not support DNSPs being exempt from providing commercially sensitive information to AEMO unless the definition of commercially sensitive information is strictly defined in the final determination with an emphasis on transparency. We note that an online database hosted by each DNSP may be a more suitable means to make this information publicly available than listing it in each DAPR, and that where possible, the data should be updated more frequently than every two years.

While the data collected by DNSPs will be utilised in the demand-side factors statement, there is no obligation for DNSPs to use this data in their own planning and analysis. ECA notes that this is a missed opportunity.

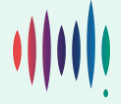
Introduction

Energy Consumers Australia (ECA) thanks the Australian Energy Market Commission (AEMC) for welcoming views on improving consideration of demand-side factors in the ISP, for which a rule change request was submitted by The Honourable Chris Bowen, Minister for Climate Change and Energy in May 2024.

The draft rule would require that the Australian Energy Market Operator (AEMO) publish a demand-side factors statement in the Integrated System Plan (ISP), which would identify and forecast the various demand-side factors that AEMO considers would impact the efficient development of the power system.

Overall, ECA broadly supports the AEMC's draft rule determination. While it is a move in the right direction, we think that it does not go far enough to make the ISP fit-for-purpose as a whole-of-system analysis. There is still room for improvement, some of which may be addressed through this rule change, and some of which would be better addressed through separate rule changes.

The proposed changes to the National Electricity Rules (NER) are necessary and would improve the ISP through enabling it to include an assessment of the uncertainties and contingent factors relating to demand-side factors that could impact its forecasts. We agree with the draft determination that effective integration and coordination of demand-side factors such as consumer energy resources (CER) would



result in positive outcomes for all market participants, including consumers who do not have access to CER, and this is supported by our analysis.¹

The ISP makes a number of assumptions about demand-side factors in its forecasting. The 2024 ISP indicated that overall electricity demand across the National Electricity Market NEM will increase from 200 TWh to 410 TWh annually by 2050, but that operational demand will only grow from 180 TWh to around 305 TWh annually due to increased uptake of CER and on-site industrial power generation. The ISP assumes that by 2050 rooftop solar uptake in the NEM will grow from one-third of detached homes to 79%, that total residential and commercial battery storage will grow from 1 GW today to 34 GW, and that 97% of all vehicles will be battery electric vehicles (EVs).² It is unclear how reasonable these assumptions are, as AEMO is not required to identify and describe the assumed demand-side developments. Utilising increased demand-side data from electricity distribution network service providers (DNSPs) will assist with understanding this.

Further, there will be substantial local variation in demand-side factors. For example, one area may experience increased rooftop solar uptake but relatively little EV charging demand, while another may experience the opposite. Understanding these variations through better use of existing demand-side data from DNSPs will assist long-term transmission planning.

Electrification may also vary spatially and occur rapidly as a result of gas network disconnections in discrete areas. We note that there is a need for increased communication between gas networks and DNSPs and AEMO, but that there is currently no requirement for this. Mandating this may require a separate change in the National Gas Rules.

Making the ISP more fit-for-purpose as a whole-of-system analysis

The draft determination has taken a broad definition of demand-side factors, including *the uptake and use of CER and distribution resources, energy efficiency, demand flexibility, and electrification*. This will include electrification policies, demand management, and energy efficiency. We support this broad definition. Including more demand-side data will further improve the robustness of the ISP and support a least cost approach to CER integration and the transmission and distribution of electricity in the NEM.

Clause 2.22.2 of the National Electricity Rules states that,³

The purpose of the Integrated System Plan is to establish a whole of system plan for the efficient development of the power system that achieves power system needs for a planning horizon of at least 20 years to contribute to achieving the national electricity objective.

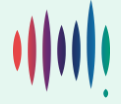
However, the current ISP is not a whole-of-system plan, as it does not sufficiently include distribution-level considerations. The ISP currently plans the electricity system to the level of specificity of the zone substation, of which there are around 2,000 in the NEM. The ISP currently assumes that there are no constraints on the export of CER at zone substations. ECA welcomes the addition to the draft determination of placing an obligation on AEMO to describe how distribution level projects that are assumed to take place would actually occur.

This rule change, through the inclusion of a demand-side factors statement in the ISP, will go some way towards making the ISP a more whole-of-system analysis. Nevertheless, the outcome of this rule change

¹ Energy Consumers Australia, 2023 - [Stepping Up](#)

² Australian Energy Market Operator, 2024 - [Integrated System Plan](#)

³ Australian Energy Market Commission - [National Electricity Rules](#)



will not be a more comprehensive analysis of the trade-offs between investment at the distribution and the transmission level (e.g., through co-optimisation), and it therefore won't completely represent the most comprehensive planning outcome.

We note that the draft determination states that AEMO may undertake a more comprehensive analysis in the future when data collection and modelling capabilities allow. ECA believes that more should be done in the near future to enable the ISP and DNSPs to undertake more comprehensive data collection, analysis, and planning in the longer term. In other words, there is a need to take more concrete steps now to enable the more comprehensive work in the future. We would like to see measures in the final determination that enable a pathway towards making the ISP more whole-of-system in the future, such as requiring AEMO to develop a prospective roadmap for how it will achieve the data collection and modelling capabilities required.

The draft determination stated that more CER and distributed resources would result in fewer large-scale infrastructure projects being required. We support the Energy Efficiency Council's initial submission recommendation that AEMO should be required to develop a statement of opportunities. This would outline the potential gaps in CER and other demand-side developments, which could create an incentive for demand-side interventions by consumers, DNSPs, or third parties to address them. This would likely result in a lower cost optimal development path for the NEM. Another option would be to simply include supply curves for small-scale energy and capacity procurements, like energy efficiency and demand response, in the annual GenCosts report. Such inclusions by AEMO would represent helpful interim solutions until a more comprehensive analysis is feasible.

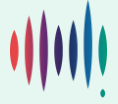
Demand-side factors information guidelines

ECA supports AEMO being responsible for developing the demand-side factors information guidelines in collaboration with DNSPs. Under the draft determination, DNSPs will have an obligation to provide the required information, and this information would be made publicly available in the ISP database unless it is commercially sensitive. As owners of regulated monopoly assets that provide an essential service, it is difficult to determine under what commercial conditions DNSP data may be sensitive. Along with several other stakeholders — including the ESB⁴ — ECA worries that there is a lack of transparency about network conditions. Several stakeholders, including those who aim to partner with consumers to use consumer assets to more cost effectively provide network services, would benefit from greater DNSP information. We do not support restricting information because it is commercially sensitive unless the definition of this is strictly defined in the final determination with an emphasis on transparency.

ECA notes the considerations around whether this data should also be made publicly available in Distribution Annual Planning Reports (DAPRs). We note that an online database hosted by each DNSP may be a more suitable means to make this information publicly available than listing it in each DAPR. ECA also recommends that, to the extent possible, DNSPs should update this database more frequently than once every two years when the demand-side factors statement is being produced for the ISP, so that it may be more useful to other stakeholders such as consumer groups.

While the data collected by DNSPs will be utilised in the demand-side factors statement, there is no obligation for DNSPs to use this data in their own planning and analysis. ECA notes that this is a missed opportunity. While a better transmission plan is useful, better distribution planning is especially valuable given that consumers pay over three times as much for the distribution network than the transmission

⁴ Energy Security Board, 2021 - [Data Strategy Final Recommendations](#)



network. However, we acknowledge that requiring DNSPs to use this data to improve planning, network utilisation, and CER hosting capacity would be better placed in another rule change request.

We support the recommendation to expand the forum between AEMO and DNSPs to include AER and other interested stakeholders, including consumer groups. We also support requiring AEMO to consider using publicly available information where possible. We acknowledge the importance of ensuring an efficient compliance with the guidelines to ensure that inefficient costs are not passed through to consumers.

Under the draft determination, AEMO would have 12 months to develop these such that they would be available in time for the 2026 ISP. We note that this would result in the guidelines being developed by December 2025, which may not be enough time to adequately include demand-side considerations for the 2026 ISP, given that the draft ISP will also be released in December 2025.

Conclusion

Overall, while the changes in this draft determination are important and begin to address some of the current shortcomings in the consideration of demand-side factors, we consider that more is needed to improve upon the collection and use of distribution network and low-voltage data, including smart meter data and other data at a higher level of granularity than the zone substation level, and to better integrate this information into DNSP decision-making and planning processes. In addition to this rule change, the AEMC, AEMO, and other stakeholders should take time now to ensure that DNSPs are being more thoughtful and pro-active about the collection and use of low-voltage data and demand-side factors to ensure the distribution system is fit for purpose for the emerging energy system.

We thank the AEMC for the opportunity to provide feedback and make ourselves available for further discussion and collaboration throughout the consultation process.

For any questions or comments about our submission, please contact Michael Dello-Iacovo at Michael.d@energyconsumersaustralia.com.au.

Yours sincerely,

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