

18 July 2024

Anna Collyer
Chair
Australian Energy Market Commission
GPO Box 2603
Sydney NSW 2000

Submitted via: <https://www.aemc.gov.au/contact-us/lodge-submission> (ERC0395)

Dear Ms Collyer,

Enhancing the Integrated System Plan to support the energy transition: Consultation Paper

Erne Energy welcomes the opportunity to provide a submission on the AEMC's Consultation Paper (the Paper) for the Enhancing the Integrated System Plan (ISP) to support the energy transition (ERC0395, ERC0396 and ERC0397) rule changes, proposed by the Honourable Chris Bowen MP, Minister for Climate Change and Energy, which covers some the recommendations of the Energy and Climate Change Ministerial Council (ECMC) review of the ISP¹.

While recognising the need for the ISP to remain a robust process and document, the proposed rule changes do little to advance the actual delivery of the much-needed new electricity transmission lines that will progress the clean energy transition.

The ISP is the national electricity transmission planning document for the National Electricity Market (NEM), based on the original National Transmission Network Development Plan (NTNDP)². While it is necessary for the ISP to incorporate scenarios on new generation and storage projects to determine the Optimal Development Path for transmission lines, the ISP is not a document that coordinates the delivery of new generation. As a result, it is not clear what benefits adding more detail on both gas and the distribution networks will bring to the usefulness of the ISP, while clearly resulting in higher costs to deliver each ISP^{3,4,5}, which will ultimately be paid by electricity consumers.

Integrating Gas

AEMO already has access to information from the Gas sector via the Gas Statement of Opportunities (GSOO)⁶. Rather than provide AEMO with additional information gathering powers, any rule change merely needs to clarify that AEMO can access the information provided by participants as part of the GSOO process when undertaking an ISP. This would be the most cost-efficient approach to ensuring AEMO has access to the additional information it believes it needs, while minimising the impact on gas participants.

There is no need to incorporate the volatility of gas fuel prices into the ISP. The ISP is prepared biennially and including the global volatility of gas fuel prices into the ISP will create uncertainty for users of the ISP. In years where the ISP is prepared when global gas fuel prices are high, less gas generation may be selected and in years when gas fuel prices are low, more gas generation may be

¹ <https://www.energy.gov.au/sites/default/files/2024-04/ecmc-response-to-isp-review.pdf>

² <https://aemo.com.au/en/energy-systems/major-publications/integrated-system-plan-isp/national-transmission-network-development-plan-ntndp>

³ <https://www.aemc.gov.au/sites/default/files/2024-06/binder1.pdf>

⁴ https://www.aemc.gov.au/sites/default/files/2024-06/erc0396_0.pdf

⁵ https://www.aemc.gov.au/sites/default/files/2024-06/erc0397_0.pdf

⁶ <https://aemo.com.au/en/energy-systems/gas/gas-forecasting-and-planning/gas-statement-of-opportunities-gsoo>

selected. This would mean that from ISP-to-ISP there would be significant variability in projected generation types creating uncertainty for investors in any type of generation, clean or fossil fuel.

AEMO already consider the general global and national economic situation, gas and alternative fuel prices⁷, and considers fuel costs and economics as part of the Inputs, Assumption and Scenario Report (IASR)⁸ development for the ISP. Additionally, the CSIRO GenCost report considers fuel costs⁹. AEMO is already including gas prices in the ISP through a variety of approaches and there is no need to include additional information.

What the ISP really needs to identify is the required future projected need for “flexibility”. Flexibility can be delivered by interconnection, the demand side, electricity storage and gas. It would be helpful to know the required capacity and energy needed to support flexibility, with AEMO clearly identifying a range of potential mixes from the available options. This would allow an assessment of the balance and trade-offs between the sources of flexibility, particularly if new transmission interconnection continues to be delayed.

The Demand Side

It would be a significant advance if AEMO was to genuinely recognise the benefits and value of the demand side in its operations, however nearly 3 years after the introduction of the Wholesale Demand Response Mechanism (WDRM)¹⁰, AEMO continues to make the participation of large-scale demand response in the market unattractive with only 67 MW of response¹¹ representing 0.2 % of total NEM demand at 36,000 MW. This is well below international electricity markets where demand response ranges between 5-10 % of total system demand¹².

The National Grid Electricity System Operator (NGESO) can access significant flexibility and was able to stand up an entirely residential-scale program in 3 months to provide 300 MW of demand turn down for the winter of 2022-23¹³. AEMO needs to do better and enabling flexibility in the market and while the review of the WDRM¹⁴ is welcome it needs to be brought forward from 2025 since flexibility is urgently required¹⁵.

The rule change to enhance the understanding of Consumer Energy Resources (CER) and the distribution network is not necessary. AEMO already have projections for CER from CSIRO and Green Energy Markets¹⁶. If there are concerns that these projections need “truthing”, then collaboration between the Distribution Network Service Providers (DNSPs) and CSIRO and Green Energy Markets, would support “back-casting” to test the CER projections that are inputs into the ISP. There is no need for a rule giving AEMO information gathering powers specific to the development of the ISP.

The Distribution Annual Planning Report (DAPR) is no longer fit-for-purpose given the significant development at the low voltage (LV) level of the distribution network¹⁷. Rather than oblige DNSPs to share distribution network constraints with just AEMO through the rules, these constraints need to be publicly shared. This would cost-efficiently provide the visibility and information needed by

⁷ https://aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2022/2023-inputs-assumptions-and-scenarios-consultation/supporting-materials-for-2023/bis-oxford-economics-2022-macroeconomic-outlook-report.pdf

⁸ <https://aemo.com.au/-/media/files/major-publications/isp/2023/2023-inputs-assumptions-and-scenarios-report.pdf?la=en>

⁹ <https://www.csiro.au/en/research/technology-space/energy/gencost>

¹⁰ <https://aemo.com.au/en/initiatives/trials-and-initiatives/wholesale-demand-response-mechanism>

¹¹ <https://www.energycouncil.com.au/analysis/the-wholesale-demand-response-mechanism-leading-a-horse-to-water/>

¹² <https://nexaadvisory.com.au/web/wp-content/uploads/2024/02/Nexa-Advisory-Report-Accelerating-CI-demand-response-in-NSW.pdf>

¹³ <https://www.nationalgrideso.com/industry-information/balancing-services/demand-flexibility-service/esos-demand-flexibility-service>

¹⁴ <https://www.aemc.gov.au/news-centre/media-releases/aemcs-review-wholesale-demand-response-mechanism>

¹⁵ <https://aemo.com.au/en/initiatives/major-programs/unlocking-cer-benefits-through-flexible-trading>

¹⁶ https://aemo.com.au/-/media/files/stakeholder_consultation/working_groups/other_meetings/frg/2023/frg-meeting-pack-8.zip?la=en

¹⁷ https://nexaadvisory.com.au/web/wp-content/uploads/2024/05/Nexa-Advisory-_Accelerating-CER-in-Australia.pdf

AEMO and by developers of all scales on the locations that are suitable for small- and medium-scale renewable generation and storage projects.

The content of the DAPR needs to be updated to reflect the advancement of CER and Distributed Energy Resources (DER) deep within the LV network. Any rule change should focus on making the DAPR fit-for-purpose to ensure distribution network data is publicly available.

Any guideline for the sharing of DNSP data should be developed by the AER, who oversee the DAPR template¹⁸, not by AEMO. The DAPR template was last reviewed in May 2017¹⁹, over 7 years ago, clearly indicating that the content is out of date. Schedule 5.8 of the National Electricity Rules (NER) covering the content of the DAPR²⁰, also needs to be revised to ensure that the DAPR remains fit-for-purpose in the rapidly devolving distribution system.

Additionally, the joint planning that Transmission Network Service Providers (TNSPs) already undertake with their relevant DNSP, should allow TNSPs to pass on relevant distribution network information to AEMO as part of the routine AEMO-TNSP joint planning and the specific ISP joint planning undertaken by TNSPs and AEMO.

While both the rule change proposal²¹ and the Paper²² make it clear that there is no intention for AEMO to develop a “distribution optimal development path (D-ODP)”:

“The proponent does not propose that the ODP be expanded or co-optimised to include investments in CER, distributed resources or the distribution network”

It is clear that AEMO are considering using the constraints and CER deployment information that DNSPs would be required to provide under the proposed Rule to plan investment at the distribution level²³. This would be a significant advancement of AEMO’s role and there is a risk that in DNSPs providing the information that AEMO says it requires for an “enhanced” ISP, that AEMO would extend its scope to become the Distribution System Operator (DSO), as it is the Transmission System Operator (TSO) today.

The ISP is a transmission plan, not a distribution plan and as such, AEMO’s reach should only extend to the Bulk Supply Point, with DNSPs providing relevant information on the status of each BSP (net neutral, exporting and importing flows).

What is more critical for the ISP and AEMO is taking proper account of the likely uptake of customers of “orchestration”. It was pleasing to see the sensitivity analysis in the 2024 ISP on the potential benefits of “orchestration” of CER²⁴, but as the Energy Consumers Australia sentiment surveys²⁵ and the social science work of Deakin University for Project Edge²⁶ attest, investors in CER are highly reluctant to give control of their assets to the “system” and this along of the persistent lack of trust in the energy sector²⁷ means that relying in the ISP on “coordinated” residential-scale storage to provide system flexibility is a significant risk. AEMO need to take proper account of the social licence

¹⁸ <https://www.aer.gov.au/industry/registers/resources/guidelines/distribution-annual-planning-report-template>

¹⁹ <https://www.aer.gov.au/industry/registers/resources/guidelines/distribution-annual-planning-report-template>

²⁰ <https://energy-rules.aemc.gov.au/ner/591/465910#Schedule%205.8>

²¹ https://www.aemc.gov.au/sites/default/files/2024-06/erc0396_0.pdf

²² [https://www.aemc.gov.au/sites/default/files/2024-](https://www.aemc.gov.au/sites/default/files/2024-06/erc00395_enhancing_the_isp_to_support_the_energy_transition_consult_paper_20_june_2024_0.pdf)

[06/erc00395_enhancing_the_isp_to_support_the_energy_transition_consult_paper_20_june_2024_0.pdf](https://www.aemc.gov.au/sites/default/files/2024-06/erc00395_enhancing_the_isp_to_support_the_energy_transition_consult_paper_20_june_2024_0.pdf)

²³ <https://www.youtube.com/watch?v=1d2Mdg6706c>, from 1:48:14-1:49:46

²⁴ <https://aemo.com.au/-/media/files/major-publications/isp/2024/2024-integrated-system-plan-isp.pdf?la=en>

²⁵ <https://energyconsumersaustralia.com.au/wp-content/uploads/ECBS-October-2023-Household-Toplines.pdf>

²⁶ <https://aemo.com.au/-/media/files/initiatives/der/2022/community-perceptions-of-der-and-aggregation-services.pdf?la=en>

²⁷ <https://www.edelman.com.au/trust/2024/trust-barometer>

needed for “orchestration” to ensure that it is not underestimating the requirement for utility scale storage.

Community sentiment

The lack of social licence for new transmission lines²⁸ is a significant barrier to delivering the ODP and TNSPs should be required to share community sentiment information with AEMO as part of the current joint planning efforts for the ISP.

Incorporating community sentiment into the ISP would provide more accurate information on likely delivery dates of key transmission projects but the rule change would not resolve the underlying issues that are delaying the construction and commissioning of key transmission interconnectors and Renewable Energy Zones (REZs).

Federal and state governments need to genuinely understand host community expectations around the benefits they receive for hosting new infrastructure, which may include ensuring that developers leave a lasting positive legacy in the communities that host the infrastructure and the construction. Too often, electricity generation and transmission line development lead to “boom and bust” cycles in the small regional host communities²⁹. Studies show that Fly In, Fly Out (FIFO) and Drive In, Drive Out (DIDO) workers would benefit from improved accommodation options in host communities, as well as leaving improved accommodation options for local communities after a project is completed³⁰.

Rural communities experience consistently worse reliability than their urban counterparts³¹ and this poor reliability is the result of outages on the distribution network. Host communities will not be able to benefit from electrification without improvement to the capacity of the distribution network, even as they view new transmission lines crossing their country.

Federal and state policies need to recognise the synergies between transmission network developments and the need for distribution network upgrades in host communities as this would allow regional Australia to actively participate in electrification, rather than have to passively endure upheaval and changes in their experience of their surroundings, while only sub-urban and urban Australia benefits from the clean energy transition.

In summary, while the community sentiment rule change has the potential to better align new transmission delivery with the reality on the ground, the gas and distribution network rule changes unlikely to result in a “better” ISP. The proposed rule changes will also not accelerate the delivery of the new interconnectors and REZs identified in the ISP ODP that are urgently required to ensure the clean energy transition meets both national renewable generation and emissions targets.

Thank you for the opportunity to provide input on the Consultation Paper. Please contact me if you need further information.

Yours Sincerely



Dr. Jill Cainey

²⁸ <https://www.dcceew.gov.au/sites/default/files/documents/community-engagement-review-report-minister-climate-change-energy.pdf>

²⁹ https://www.utas.edu.au/__data/assets/pdf_file/0007/1677517/population-change-and-housing-needs-in-tasmania-Aug-2023.pdf

³⁰ <https://www.csrn.uq.edu.au/publications/factors-linked-to-the-well-being-of-fly-in-fly-out-fifo-workers>

³¹ <https://www.aer.gov.au/system/files/2023-Electricity-network-performance-report.pdf>