

9 July 2024

AEMC

Via: www.aemc.gov.au

Dear Madam / Sir,

Re: Consultation paper “ENHANCING THE INTEGRATED SYSTEM PLAN TO SUPPORT THE ENERGY TRANSITION”, 20 June 2024

I am the Director of the Gas & Energy Transition Research Centre (the **Centre**) at the University of Queensland (UQ). The Centre conducts multi-disciplinary research across a range of themes relevant to the gas, resources and energy industries and is co-funded by the University and industry partners. This letter represents my personal views, unless expressly stated otherwise, and does not necessarily represent the views of UQ or the Centre partners.

The purpose of this submission is to comment on the “Enhancing the Integrated System Plan to Support the Energy Transition – 20 June 2024” consultation paper (the **Paper**) and the three proposed rule changes:

1. Better integrating gas into the Integrated System Plan (Electricity and Gas) Rule
2. Improving consideration of demand-side factors in the Integrated System Plan (Electricity) Rule
3. Better integrating community sentiment into the Integrated System Plan (Electricity) Rule

Given the Centre’s expertise and research interests we have drafted responses primarily in relation to proposed rule changes 1 and 3 (as per the above list) only.

I believe that proposed rule changes 1 and 2 will improve the comprehensiveness and transparency of the ISP process at very low risk of any unintended or negative consequences. We do note, however, that the effectiveness of rule change 1 could depend on how the gas system is considered in other key elements of the ISP process, including (but not limited to) the definition of the IASR Scenarios. In contrast, despite community sentiment being an important consideration for project proponents, it is unclear if rule change 3 is sound as its implementation will be challenging and there is a real risk of negative, unintended consequences.

I would welcome the opportunity to engage further with AEMC or AEMO in relation to any aspects of this submission.

Yours sincerely,



Professor David Close
Director, Gas & Energy Transition Research Centre

Consultation questions and responses

Question 1: Should greater gas market analysis be required under the ISP?

(a) Would requiring AEMO to include greater analysis of gas in the ISP provide benefits to electricity consumers? This includes information to inform the following:

- i. further analysis of future gas demand and pricing
- ii. developing projections about the future utilisation of gas infrastructure
- iii. collating pipeline closures or conversion dates
- iv. reflecting updated gas generator fuel costs

Should the rules be amended to explicitly require this?

(b) Should the rules be amended to enable AEMO to utilise gas information provided to it under other functions?

Response 1:

Yes, the ISP is the optimal mechanism or process to provide greater analysis of the gas market relevant to the scenarios considered within any given ISP.

(a) Our own research, and multiple modelling studies¹, agree with AEMO analysis that gas-powered generation is likely to be critical for maintaining electricity supply reliability over the short and long-term, as the role of wind and solar generation grows. Improved modelling of the interconnections between the gas and electricity systems will inform improved planning, which will contribute to the goal of maintaining reliability at lowest cost to consumers.

In response to the AEMC question on specific information types:

- i. Some analysis or third-party price references are appropriate, but dedicating substantial resources is likely to lead to a false sense of accuracy. Price analysis or forecasting is notoriously difficult - given that GPG will be a 'provider of last resort', it's costs will only be borne if absolutely necessary.

However, it will be critical to provide analysis of the uncertainty over demand for gas-powered-generation (GPG), and the gas supply needed to enable that.

- ii. Understanding future utilisation of gas infrastructure is critical, arguably just as much as understanding retirement of coal plants. If existing pipeline infrastructure was to be retired, which could happen for any number of commercial or operational reasons, replacement would be impossible on a short-term basis.

- iii. As per point ii.

- iv. This seems a reasonable data stream to capture and consider in future evaluations as it will obviously contribute to understanding total system cost, which should arguably be the objective of AEMO and any ISP.

(b) In principle, AEMO should make use of the best information available to it for this purpose, as the value of this rule change will depend on the quality of the analysis delivered by AEMO. We provide no perspective on how to balance any challenges this might have for data confidentiality.

¹ Simshauser & Gilmore (2024) Solving for 'y': demand shocks from Australia's gas turbine fleet.

Question 2: Will the proposed solution support a more robust ISP by better integrating gas and electricity infrastructure developments?

- a) Will requiring AEMO to carry out further analysis of gas in the ISP improve the ISP analysis? Why or why not?
- (b) Is it appropriate for AEMO to use gas information available to it under the NGR for the purpose of the ISP? Are there any risks that we should be aware of in extending the use of or publication of specific information?

Response 2:

Yes it could, if implemented well.

- a) Yes, the ISP analysis will be improved by more in-depth analysis of gas demand and supply factors. As the gas transport network is not flexible at its limits, the bottle-necks in the transport system are critical to understanding risks to GPG in different sectors of the NEM.

To be effective, given the nature of the gas supply system, this might need to be carried out with some degree of sub-state granularity. Our own research indicates that, because GPG will operate in future as the 'option of last resort', robust uncertainty analysis on GPG demand (subject to future uncertainties about weather, infrastructure transition timings, and other factors) will be crucial for this rule change to lead to improved ISP conclusions.

- b) AEMO should use all data they have access to for the most robust modelling and scenario analysis. Given the level of detail that is (or isn't) included in the ISP it is unlikely that there will be commercial sensitivities to any gas supplier or user. However, AEMO should, of course, be aware of potential commercial sensitivities or breaches of confidentiality and ensure data are aggregated and anonymised appropriately where necessary.

Question 3: What are your views on the costs and benefits of requiring AEMO to undertake additional gas analysis in the ISP?

- (a) What do you consider to be the benefits of the proposed solution? Is there anything that might erode the benefits of reduce the likelihood of the benefits being achieved?
- (b) What do you consider to be the costs of the proposed solution?

Response 3:

- a) The benefits are clear, as per the answers to prior questions and as laid out in the Paper.
- b) As per the Paper, the primary costs will be increased people-hours of AEMO staff and key stakeholders to compile and review relevant information. At the UQ Gas & Energy Transition Research Centre, key elements of this work are being researched, as we are in the process of analysing system risks that arise from the volatility of GPG. We would be happy to engage and support AEMO in their efforts to comply with this potential rule change. Leveraging work already completed will potentially help AEMO efficiency.

A further cost that should be considered, is whether by undertaking this rule change there is a sense of complacency that becomes embedded within community and policy makers that action is underway. If such complacency prevents more urgent planning and action commencing more quickly than on the ISP 2026 cycle, then this would be a negative,

unintended consequence. The challenges that will likely be articulated in the 2026 ISP, if this rule change is passed, won't have aged well between 2024 and 2026.

Question 4: What implementation considerations need to be considered?

(a) Do you have any concerns about sharing gas information received under the NGR for the purposes of developing the ISP? Is there sufficient clarity on what information should and should not be publicly disclosed?

(b) Are there any other implementation issues that should be considered?

Response 4:

- a) No position. However, we would recommend sufficient flexibility in the rule change that AEMO can use a commonsense approach to protecting legitimate commercial interests of any parties that provide data under the NGR.
- b) Confidentiality: That a default position is that no data are made publicly available without explicit permission of the data providers, unless already allowed for under existing the NGR (or other regulation/legislation), and that all data are anonymised and aggregated to minimise the risk that a third party could reverse engineer confidential data.

Speed: The Proponent should consider how to accelerate the intent of the rule change given the immediate risks identified by AEMO this winter.

Question 5: Are there alternative ways in which further analysis can be included within the ISP instead of the proposed rule change?

(a) Would the development of a procedure or policy enable the same outcome?

(b) What level of prescription vs principle is appropriate when setting out the requirements for the ISP?

- a) No position.
- b) The requirements should be objective not prescriptive – there are no circumstances I can contemplate where prescription in the rule will improve AEMO's ability to undertake their analysis.

Question 6: Should AEMO be required to expand consideration of CER and distributed resources in the ISP?

(a) Should the ISP's analysis include greater consideration of the assumptions and contingent factors underpinning the expected development of CER and distributed resources? Why or why not?

(b) Do you agree that AEMO is currently constrained in its ability to access relevant information about distribution network hosting capacity and relevant CER forecasts from DNSPs?

- a) Yes, because the uncertainty regarding CER may have considerable impact on model and real-world outcomes. Unless there is a top-down, government directive not to rely on CER (which seems unlikely) in the future NEM, then understanding the risks associated with any assumption

that CER can play a substantial energy storage role in the NEM is critical for AEMO and the ISP.

- b) No position.

Questions 7-10: No position.

Question 11: Do you consider that the current process for developing the ISP is creating uncertainty and inconsistency in how community sentiment is incorporated in the ISP?

(a) Should AEMO be explicitly required to consider community sentiment when developing the ISP? Should TNSPs be explicitly required to share relevant information as part of the joint planning process?

- a) In principle, consideration of community sentiment is critical to the broader energy transition and to the development of renewable energy projects in regional areas of Australia in particular. However, how would AEMO define community and what consultation or engagement would be considered appropriate to gauge something as subjective as “sentiment”?

I would suggest that this rule change should only require AEMO to provide qualitative risk assessments of project execution schedule for major transmission and development projects as part of the ISP process that arise from community or not-for-profit group objections, protests and/or court challenges. Over time a greater volume of projects can be assessed for such delays and AEMO can best consider how to use such data in forecasts and plans.

TNSPs should be engaged as part of the risk assessment process, however, it is likely that data relevant to stakeholders may be sensitive and subject to privacy considerations and, therefore, prescriptive requirements for TNSPs to disclose such information could create potential conflicts and be counter-productive.

Question 12: Are changes required to facilitate a more robust analysis of community sentiment in the ISP?

(a) Do the current rules result in a significant gap in powers and guidance for AEMO to undertake an analysis of community sentiment impacts?

(b) Are there any barriers in the current rules to AEMO requesting community sentiment information and/or undertaking analysis of community impact?

Response 12:

- a) No position.
- b) It appears that AEMO can already consider community sentiment on an as needed basis under “other matters”, making it questionable as to whether mandating assessment of sentiment is of value to the overall ISP process. As per the answer above, sentiment is subjective and it would be very difficult to ascertain whether sentiment has indeed been captured and interpreted correctly or translated into project delay estimates accurately.

Question 13: What are the costs and benefits of requiring enhanced consideration of community sentiment in the development of the ISP?

- (a) What are the benefits of the proposed solution? Is there anything that might erode or improve the benefits?
- (b) What are the costs of the proposed solution? Is there anything that may reduce the costs?

Response 13:

- a) The benefits, in a perfect world, would be that the ISP is more robust and more accurately reflects likely outcomes. However, what erodes such idealised benefits are the realities of quantifying community sentiment and the amount of effort that could be expended for impacts that can't be measured or assessed.
- b) Other than time costs, AEMC should give consideration to the cost of the risk that some communities may gain some level of 'protection' from development by having strongly negative sentiment. Communities, or even minority interest groups, may be motivated to use the AEMO sentiment process to further complicate necessary developments.

Question 14: Are there implementation considerations for the community sentiment rule change request?

Response 14:

The UQ Gas & Energy Transition Research Centre would be happy to discuss the complexities of implementing stakeholder facing surveys and both information sharing and gathering.

Question 15: Are more prescriptive rules necessary to ensure AEMO and TNSPs consider and share relevant information on community sentiment?

- (a) Are guidelines a more suitable way for community sentiment to be incorporated earlier in the ISP development process?
- (b) Are there other options that stakeholders consider would be a better solution to rule changes (if required)?

Response 15:

- a) Arguably yes, guidelines or any flexible and adaptable framework will likely provide more ways for AEMO to achieve their mission without using resources on prescriptive requirements that may not be fit for purpose.
- b) Guidelines and/or risk assessments on an as-needed basis.

Question 16: Assessment framework

Do you agree with the proposed assessment criteria? Are there additional criteria that the Commission should consider or criteria included here that are not relevant?