



22 November 2024

Submission: 2026 ISP Methodology Issues Paper

The Australian Pipelines and Gas Association (APGA) represents the owners, operators, designers, constructors and service providers of Australia's pipeline infrastructure, connecting natural and renewable gas production to demand centres in cities and other locations across Australia. Offering a wide range of services to gas users, retailers and producers, APGA members ensure safe and reliable delivery of over 1,600 PJpa of gas consumed in Australia alongside over 4,500 PJpa of gas for export.¹ We are at the forefront of Australia's renewable gas industry, helping achieve net-zero more quickly and affordably.

APGA welcomes the opportunity to provide a submission to AEMO's consultation on the Methodology Issues Paper for the 2026 ISP. While it is the intention of Energy Ministers that the ISP remain dedicated to "the sole aim of optimising electricity infrastructure investments", a greater understanding of gas markets will improve the ISP's forecasts both for electricity infrastructure needs and for the future of the east coast energy system.

Including gas in the ISP a necessary change

APGA has consistently advocated for improvements to AEMO's gas modelling capability for the ISP. A modelling approach that enables a detailed consideration of both gas and electricity supply chains while recognising the differences between them is necessary to present an accurate picture of a complex whole.

At the same time, APGA recognises that the primary and legislated purpose of AEMO in developing the ISP is to develop a plan for "*the long term interests of the consumers of electricity.*" This does not extend to consumers of gas or, indeed, for energy consumers as a whole, although APGA has argued that the best interests of electricity consumers cannot be fully met in the absence of detailed gas market analysis.

The current ISP demand-side analysis, for example, has consistently underestimated gas consumption. Successive ISPs have forecast declines in the requirement for dispatch from gas power generation which have not been consistent with actual demand. AEMO is also not able to include its understanding of gas transport and storage capacities into energy storage modelling for the ISP. This has direct implications for gas market participants involved in supply and transport of gas to GPG, but also has impacts for the electricity sector. The operation of gas markets ultimately impacts electricity networks and hence the quality of long-term forecasting of both markets.

¹ DCCEE, 2024, *Australian Energy Update 2024*, Figure 3, https://www.energy.gov.au/sites/default/files/2024-08/australian_energy_update_2024.pdf

The proposed development of a gas supply expansion model goes a long way to plugging the gaps in the ISP. AEMO has designed these changes to comply with the expected final definition of gas development projections as proposed by the AEMC in its draft determination.² APGA broadly approves of the proposed design of the projections, with a caveat in implementation.

Gas development projections must remain broad

AEMO's proposed gas supply expansion model (GSEM) is intended to assist in identifying solutions to gas supply shortfalls – which will improve the reliability of the entire system.

The GSEM will *determine where supply and infrastructure options or augmentations could be located to meet ISP development pathways under different scenarios and to maintain appropriate adequacy of gas supplies in the East Coast Gas System*. APGA understands that these geographic determinations are intended to be very low resolution, and limited to the ISP sub-region level.

APGA agrees with this approach as long as these projections remain at the sub-regional level, with the gas market left to decide the nature of any infrastructure developments to meet identified needs.

Industry engagement critical to success

APGA is pleased to see a strong focus on industry engagement as an input to the gas development projections and GSEM. Historically, this has not necessarily been the case when it comes to developing the ISP. There have been low levels of engagement between the AEMO forecasting team with the incumbent gas industry outside of Victoria. Insights from AEMO's gas operations team have not necessarily filtered through to the forecasting team, potentially due to the legislative limitations on what can be included in the ISP.

With the changes to formalise industry engagement APGA anticipates that stronger engagement between AEMO and the gas industry will provide mutually beneficial outcomes, especially in the quality of forecasting for the 2026 ISP.

To discuss any of the above feedback further, please contact me on +61 409 489 814 or crafael@apga.org.au.

Yours sincerely,



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² AEMC, 2024, *Better integrating gas and community sentiment into the ISP (ERC0395)*, <https://www.aemc.gov.au/rule-changes/better-integrating-gas-and-community-sentiment-isp>



Consultation Questions

AEMO questions – Gas supply expansion model	APGA response
<p>1. Do you consider that the proposal to develop a gas supply expansion model appropriately addresses the action in the Energy Ministers’ response to the Review of the ISP for additional gas analysis to be incorporated in the ISP? If yes, why? If not, why not, and how could this action otherwise be achieved?</p>	<p>The gas supply expansion model proposed by AEMO, in our estimation, does address the need for additional gas analysis to be incorporated in the ISP – to the extent that it can do so while also meeting the needs of the ISP.</p> <p>The changes permit AEMO to develop this model using information that is already available to it. This addresses the incongruity of AEMO collecting valuable insights for the GSOO and not being able to apply these insights and modelling to the ISP.</p> <p>Enabling AEMO to use this information, rather than collecting any additional information, will reduce the burden of compliance on gas market participants.</p>
<p>2. Do you agree with the proposal for AEMO to develop at least one gas development projection per ISP scenario, and apply the projection as an input to the capacity outlook model? If yes, why? If not, what method would you recommend for the inclusion of gas development projections in the ISP?</p>	<p>APGA agrees to this proposal to the extent that the gas development projections are a necessary component of ensuring the ISP adequately reflects a realistic trajectory for gas. APGA also agrees that industry consultation is a critical part of this, providing the necessary context to developing these projections.</p> <p>It is APGA’s understanding that any projections of supply and infrastructure options or augmentations are intended coarse and limited in resolution to sub-regions. The nature of the gas market makes it inappropriate for AEMO to recommend specific gas developments in the ISP, and APGA agrees with this approach as long as those projections remain coarse.</p>

<p>3. What alternative approaches should AEMO consider for enhancing the incorporation of gas in the ISP to address the action in the Energy Ministers' response?</p>	<p>APGA has previously advocated³ for a multi-vector modelling approach. Specifically, developing a separate gas market model to complement the existing electricity model, considering future gas supply and network economics with the introduction of renewable gases. APGA appreciates that such a model would be beyond the current scope permitted by the National Electricity Laws and likely AEMO's current resourcing.</p> <p>AEMO's current proposal is an expansion to their existing modelling capability, which is currently focused on a single vector (electricity) with gas largely an input for the purposes of gas power generation fuel. The proposal is a considerable improvement, but it remains to be seen whether the expanded model can truly reflect the intricacies of and have reliable predictive power for gas markets.</p> <p>APGA concurs with AGIG's response that the ISP needs a more nuanced consideration of hydrogen and H2 production pathways. The potential for H2 production to act as an energy storage mechanism (i.e. a sink for excess renewable electricity production) adds a complex but important variable that must be considered in projections. This is not hypothetical – the SA Whyalla H2 GPG facility is being constructed on this principle.</p> <p>AEMO will be incorporating more detailed data and assumptions about H2 (and biomethane) production costs through data sourced from ACIL Allen. APGA observes that previous ISPs have limited H2 production locations to ports, with electricity sourced from the NEM – rather than produced behind the meter at VRE generation sources. This is an unrealistic model for the majority of domestic H2 production due to cost and also has implications for the electricity system generally. Given this AEMO should reconsider its H2</p>
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³ APGA, 2024, *Submission: 2024-25 Federal Budget*, <https://apga.org.au/submissions/2024-25-federal-budget>

	assumptions more broadly, including H2 production location and the 10% blending limit applied to pipelines.
4. What improvements could be made to AEMO’s proposed approach to increase consideration of gas availability, considering gas transportation and storage capacity?	<p>AEMO’s approach to including gas transport and storage capacities is not clear in the Issues Paper and presumably will be developed in more detail for the Methodology in 2025.</p> <p>The use of existing data collected by AEMO for its other purposes – notably the GSOO and Gas Bulletin Board – is likely to be sufficient to provide AEMO with the information necessary to increase consideration of these factors in the ISP.</p> <p>An ISP which does not consider these factors risks – and likely already has – substantially overestimating the scale of electricity storage required in a net zero NEM. AEMO has to date not been able to include its existing gas storage and transport data⁴ in ISP modelling. Any consideration of gas transportation and storage capacity is an improvement.</p>
5. What improvements could be made to AEMO’s proposed approach in its capacity outlook models to improve the representation of fuel usage for gas generation, particularly for mid-merit capacity?	<p>As noted in the substantive comments above, the current ISP demand-side analysis has consistently underestimated gas consumption. Successive ISPs have forecast declines in the requirement for dispatch from gas power generation which have not been consistent with actual demand.</p> <p>APGA approves of any measures to improve this modelling using the information already available to AEMO through the GSOO and gas Bulletin Board. It is likely this information will provide substantial uplift in the quality of forecasting developed for the ISP regarding gas generation capacity.</p>

⁴ AEMO, 2021, *Victoria’s Gas Substitution Roadmap*, p10, <https://engage.vic.gov.au/download/document/17466>; AEMO, 2024, *Gas Statement of Opportunities 2024*, https://aemo.com.au/-/media/files/gas/national_planning_and_forecasting/gsoo/2024/aemo-2024-gas-statement-of-opportunities-gsoo-report.pdf