THE HON CHRIS BOWEN MP
MINISTER FOR CLIMATE CHANGE AND ENERGY

MS24-000566

Ms Anna Collyer
Chair
Australian Energy Market Commission
Level 15, 60 Castlereagh Street
SYDNEY NSW 2000

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Dear Ms Collyer Anna

I write in regard to proposed changes to the National Electricity Rules and National Gas Rules stemming from the recently completed Review of the Australian Energy Market Operator's (AEMO's) Integrated System Plan (ISP).

At its meeting on 1 March 2024, the Energy and Climate Change Ministerial Council agreed to the recommendations of the ISP Review, which considered whether the scope and function of the ISP remains fit-for-purpose to support the energy transformation given the rapidly evolving landscape. At the highest level, the review concluded that while AEMO was meeting the role established for it under the current ISP frameworks, there were opportunities for the ISP to provide more detailed advice on several matters of critical importance to the energy transformation.

Attached are a set of rule change requests that seek to give effect to key recommendations of the ISP Review. I endorse these rule change requests and ask the AEMC progress with their initiation.

Yours sincerely

CHRIS BOWEN

Enc

Australian Government
Department of Climate Change, Energy, the Environment and Water

Rule Change Request

Better integrating gas into the Integrated System Plan

May 2024

1. Request to make a Rule

1.1 Name and address of the person making the request

The Honourable Chris Bowen MP
Minister for Climate Change and Energy
Parliament House
Canberra ACT 2600

2. Statement of Issue

2.1 Integrating gas into the ISP to ensure whole of energy system considerations

The Australian Energy Market Operator (AEMO) is required to prepare an Integrated System Plan (ISP) every two years in accordance with rule 5.22 of the National Electricity Rules (NER). The legislated purpose of the ISP, as provided by clause 5.22.1, 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 for the long-term interests of consumers of electricity.

In October 2022, the Energy and Climate Change Ministerial Council agreed to a review of the ISP to consider whether the scope and function of the ISP remains fit-for-purpose to support the energy transformation, including if greater integration of gas could improve the analysis in the ISP.

Although the ISP currently incorporates some gas market data and considers the ongoing need to retain and invest in gas-powered generation (GPG) as part of its analysis, and the ISP's scenarios consider the future extent of electrification and opportunities for hydrogen, the ISP does not analyse the costs associated with gas infrastructure investments. The analysis also does not consider if the gas developments assumed in the ISP are likely or commercially feasible, or if gas will be available to service GPG at the price or quantity anticipated. This approach highlights that there is a lack of specificity in the NER about how the interplay between gas and electricity markets should be dealt with in preparation of the ISP.

The NER do not require the ISP to include specific gas analysis, with the only direction in relation to gas is for AEMO to have regard to the most recent gas statement of opportunities (GSOO) under the National Gas Law (NGL) in developing the ISP (clause 5.22.10(b)(6)). The absence of clear direction provides uncertainty in how AEMO considers gas in the ISP's analysis.

The ECMC's view[1] is the analysis supporting the ISP could be improved by deeper and more explicit consideration of gas market conditions and recommends the ISP include:

- additional analysis of future gas demand and gas pricing
- projections about the future utilisation of gas infrastructure
- information about dates of expected gas pipeline or GPG closure or conversion
- updated medium- and long-term projections of gas generator fuel costs to reflect expectations about gas market developments.

Gas, including renewable gases and hydrogen, will remain an important energy source for the electricity sector throughout the energy transformation. GPG, in the short to medium term, will be

[1] See ECMC Response to the ISP Review at https://www.energy.gov.au/sites/default/files/2024-04/ecmc-response-to-isp-review.pdf.

used to support system reliability as thermal generators exit and new generation is brought online. In the longer term, GPG will continue to provide firming capacity as an alternative source of generation during periods of low variable renewable energy production.

The most effective way to integrate gas and electricity planning is for AEMO to work closely with stakeholders to develop gas development projections, which set out how AEMO expects the gas sector to develop (both in terms of gas demand, and infrastructure investment to supply expected gas demand) under prevailing policies and market incentives. This would reflect information AEMO receives from market participants about how the sector is likely to develop to inform planning for the electricity sector. Importantly, this stops short of requiring AEMO to project an optimal development path (ODP) for the gas market. This distinction reduces the extent of informational requirements for AEMO to develop gas development projections, since it would require information pertaining only to planned or likely gas sector developments, rather than a range of possible future investment opportunities to ensure that the gas development projections are optimal or least cost.

ECMC supports AEMO using the gas development projections in combination with its electricity sector modelling to identify the cost and benefits of relevant gas and electricity projects and comparatively analyse trade-offs of these projects, but with the sole aim of optimising electricity infrastructure investments in the ODP in the ISP. This way, the gas development projections would inform market participants and policymakers about the investments that need to be made in the electricity sector, given the likely future path of the gas sector. It would also make explicit in the ISP, AEMO's assumptions about the future of gas and describe a consolidated gas industry view of what the future may look like in the various ISP scenarios (based on AEMO's engagement with industry), without fettering market signals for private investment.

Such analysis will be reliant on appropriate direction being provided to AEMO through an amendment to the NER, on the way stakeholders should be engaged, the required processes to be undertaken in preparation of the ISP and the products that should be delivered as outputs in the ISP draft and final reports.

Beyond the NER, consideration must also be given to the authority under the National Gas Rules (NGR) for AEMO to utilise information it is provided to undertake additional gas analysis in the ISP. Although section 91FD of the NGL authorises AEMO to use information obtained under the NGL when exercising its statutory functions, including its functions under the NER, the NGR appears inconsistent, implying that the information AEMO obtains to fulfil its functions under the NGR may only be used for the purpose for which it was gathered. The inconsistency between the NGL and the NGR may cast doubt on AEMO's ability to utilise gathered data in relation to its functions under the NGR in undertaking the new analysis for the ISP, particularly where that data collection has cost implications for AEMO or for gas market participants. This rule change request seeks to create a new rule that provides AEMO with the explicit authority to utilise information acquired through its NGR functions to undertake the additional analysis for the ISP.

3. Description of the proposed rule change

This rule change request seeks to amend the NER to implement ECMC's request to better integrate gas into the ISP's analysis by:

- Including a definition in Clause 5.10.2 for gas development projections which means a set of projects or developments that span the gas value chain (both in terms of gas demand, and

infrastructure investment to supply expected gas demand) that AEMO considers most likely, consistent with the scenarios in the ISP.

- Amending clause 5.22.6(a) to require AEMO to publish gas development projections in the ISP.
- Amending clause 5.22.10 to require AEMO to undertake the following activities:
    - Expanding the consideration of gas in the ISP, by:
        - carrying out additional analysis of future gas demand and gas pricing
        - developing projections about the future utilisation (and availability) of gas infrastructure
        - collating information about dates of expected gas pipeline or GPG closure or conversion
        - updating medium- and long-term projections of gas generator fuel costs to reflect expectations about gas market developments
    - develop in close consultation with stakeholders gas development projections and:
        - use 'gas development projections' with its electricity sector modelling to identify and analyse the cost/benefit trade-offs of projects across the two sectors, with the sole aim of optimising electricity infrastructure investments identified in the ODP in the ISP
        - update the gas development projections to reflect the outcomes of this analysis
        - publish the updated gas development projections in the ISP.
    - Consider gas market benefits and costs associated with gas production, transport, pipeline access availability and storage needs.

This rule change request also seeks to amend the NGR to ensure AEMO is able to use the information necessary to give adequate consideration of gas market developments in the ISP by:

- Including a new rule that provides AEMO with the authority to use and/or disclose any information obtained under the NGR to fulfil its obligations under the NER, in particular in regard to development of the ISP.

4. How the proposed rule change will address the issue

Changes to clause 5.22.10 proposed in this request, will require AEMO to undertake additional gas analysis in the ISP including analysing future gas demand and gas pricing, developing projections about the future utilisation of gas infrastructure, collating pipeline closures or conversion dates and reflecting updated gas generator fuel costs. This additional analysis will improve the accuracy of the gas sector information included in the ISP and will form the basis for the gas development projections that will be used in the ISP modelling process.

The change to clause 5.22.6(a) proposed in this request will require AEMO to develop and publish gas development projections in the ISP, supported by the new analysis and stakeholder engagement it will be required to undertake through the proposed change to clause 5.22.10. The gas development projections will set out how AEMO expects the gas sector to develop within its scenarios (both in terms of demand, and infrastructure investment to supply expected demand). As demand profiles for gas are expected to change, there are expected to be significant peaks in

demand when it is most needed. Using the gas development projections to update their assumptions underlying GPG, AEMO would then have a more robust basis for comparing GPG projects with alternatives.

Some of the information required for AEMO to undertake the analysis for the ISP will be gathered through its NGR functions. The NGR does not explicitly provide AEMO with authority to use the information gathered under NGR for NER purposes including the ISP. The inclusion of a new rule in the NGR will remove any uncertainty that AEMO can use information it receives under the NGR for NER purposes by providing AEMO with the explicit power to use and disclose information in obtains through its NGR functions to support the gas analysis in the ISP.

5. How the proposed rule change will or is likely to contribute to the achievement of the National Energy Objectives

The National Electricity Objective (NEO), as stated in the National Electricity Law, is:

> "to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to:
>
> (a) price, quality, safety, reliability and security of supply of electricity; and
> (b) the reliability, safety and security of the national electricity system; and
> (c) the achievement of targets set by a participating jurisdiction—
> i. for reducing Australia's greenhouse gas emissions; or
> ii. that are likely to contribute to reducing Australia's greenhouse gas emissions."

The primary objective of the ISP is to optimise value to end consumers by designing the lowest cost, secure and reliable energy system capable of meeting any emissions trajectory determined by policy makers at an acceptable level of risk, aligning with the NEO. The amendments to the NER through this rule change request will further enhance the ISP to contribute to the achievement of the NEO.

Gas will remain an important energy source for the electricity sector throughout the energy transformation. GPG will support system reliability as thermal generators exit and new renewable generation is brought online and will continue to provide firming capacity during periods of low variable renewable energy production. Given its critical function in supporting the National Electricity Market (NEM) as it transitions to net zero emissions, it is important that the ISP, that identifies the energy infrastructure investments needed to transition the NEM, properly considers the cost and feasibility of gas developments including supply issues in its analysis.

The development and publication of gas development projections in the ISP will support better consideration of all energy sources that are required to ensure the stable operation of the NEM at the least cost. The additional analysis will promote the efficient investment in both electricity and gas infrastructure that will lead to better outcomes for electricity consumers by:

- Allowing AEMO to better consider whether alternatives to gas investments (such as storage) might be more economic improving the ODP identified in the ISP.
- Providing more visibility to stakeholders about these options and their electricity sector alternatives, which may underpin more efficient market conduct.

- Better facilitating the transition to net zero in the electricity sector through the mechanisms above, particularly in terms of better informing stakeholders regarding the plausible future state of gas infrastructure throughout the transition.

The National Gas Objective (NGO) as stated in the NGL is:

> "to promote efficient investment in, and efficient operation and use of, covered gas services for the long term interests of consumers of covered gas with respect to:
>
> (a) price, quality, safety, reliability and security of supply of natural gas; and
> (b) the achievement of targets set by a participating jurisdiction—
> i. for reducing Australia's greenhouse gas emissions; or
> ii. that are likely to contribute to reducing Australia's greenhouse gas emissions."

The additional gas analysis that will be undertaken for the ISP supported by the changes to the NGR through this rule change request will also support delivery of the NGO. Improved consideration of the role of gas fired generation in the NEM would benefit gas consumers by establishing a more transparent and realistic demand projection for gas, which will support efficient gas market investment decisions. This is because ISP modelling is also used for developing the gas demand projections in the GSOO, and having a clearer understanding of future gas demand for electricity generation would improve the GSOO analysis, and therefore improve outcomes for gas consumers. Making explicit AEMO's assumptions in the ISP about the future of gas would also benefit gas consumers by improving the transparency of AEMO's gas demand projections for gas market participants, enabling them to make more informed decisions.

6. Expected costs, benefits and impacts

6.1 Expected benefits

The inclusion of comprehensive gas development projections in the ISP will facilitate better informed analysis of gas market impacts on the ODP for transmission and associated large-scale generation and storage. These projections will enable AEMO to more accurately assess whether alternatives to gas, such as electricity storage solutions, might be more cost-effective than gas investments, thereby improving the ODP. It is also expected to increase stakeholder visibility regarding these options and their electricity sector alternatives, and better inform stakeholders of the potential future state of gas infrastructure throughout the energy transition, both of which will promote efficient market conduct.

6.2 Expected costs

The proposed amendments will impose an additional cost on AEMO in preparing the ISP. The ISP is funded by fees charged to transmission network service providers (TNSPs) under AEMO's National Transmission Planner function. It is expected that additional costs in relation to these rule changes will be met through higher fees to TNSPs, as per existing arrangements for cost recovery for the ISP. However, any additional fees that are ultimately passed through to electricity consumers would be minor once spread across the NEM and are expected to be offset against more effective energy system planning (and potentially the avoidance of higher cost investments that might eventuate in the absence of the proposed amendments).

There is not expected to be a cost to gas market participants for AEMO to utilise information that it already obtains under its NGR functions to support the new analysis in the ISP. Engagement activities

proposed that will support the development of gas development projections are not expected to be onerous and may already take place on a less structured basis between AEMO and gas market participants in the development of other gas related publications.

6.3 Expected impacts

The proposed rule change will impose additional requirements on AEMO in developing the ISP including additional engagement activities with gas market participants to develop the gas development projections. Gas market participants are not expected to be required to provide AEMO with additional information as a result of this rule change request. Engagement activities are not expected to be onerous and may already take place on a less structured basis.