



EnergyAustralia

LIGHT THE WAY

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Dear Commissioners

AEMC review into extending the regulatory frameworks to hydrogen and renewable gases

EnergyAustralia is one of Australia's largest energy companies with around 2.4 million electricity and gas accounts in NSW, Victoria, Queensland, South Australia, and the Australian Capital Territory, of which around 22k customers are supported under our hardship program (EnergyAssist). EnergyAustralia owns, contracts, and operates a diversified energy generation portfolio that includes coal, gas, battery storage, demand response, solar, and wind assets. Combined, these assets comprise 4,500MW of generation capacity.

EnergyAustralia supports and is leading in efforts to enable deep decarbonisation pathways, particularly projects that test the prospects of hydrogen and renewable gas in playing different roles across the energy supply chain. We are developing the 300MW Tallawarra B power station expansion which involves a commitment to buy 200,000kg of hydrogen per year from 2025 to offset the plant's residual scope one emissions. We have also partnered with AGIG in its HyP SA project where a small number of our customers will be supplied a gas blend of up to 5 per cent renewable hydrogen.

EnergyAustralia therefore welcomes the opportunity to comment on the AEMC's review into extending the regulatory frameworks to hydrogen and renewable gases. While uncertainty remains on the preferred format for the decarbonisation of the energy market in Australia, we appreciate the AEMC's consideration of the necessary changes required to facilitate exploring the competing options, replacing natural gas with full electrification or hydrogen and renewable gases (natural gas equivalents).

EnergyAustralia supports the AEMC exploring how natural gas equivalents can be incorporated into the regulatory framework; however, this support is limited to investigating changes that facilitate exploring the inclusion of natural gas equivalents, as we are reluctant to support a significant overhaul of regulation prior to confirmation of the requirement for natural gas equivalents to be incorporated into the gas regulatory framework.

Trials incorporating natural gas equivalents are still in their infancy, with a lack of detail of the success or failures, and it is not yet certain there is a need for a market for hydrogen and renewable gases or that a price can be achieved that economically supports a natural gas equivalent industry. Therefore, priority changes should be explored but a full scale review should be postponed until the need is greater than the risk to *the long-term interests of consumers of natural gas with respect to price, safety and reliability*.

Identifying all impacts to regulation from the inclusion of natural gas equivalents is a significant task, and EnergyAustralia's views in this submission do not reflect a fulsome consideration of every possible ramification. Instead our views are predominantly on the key issues identified by the AEMC in the consultation paper, with the impacts and assumptions listed in the sections below being general in nature.

To this end, we support the AEMC's collaborative approach, particularly its openness to meet with us and other participants in recent weeks, and further note its upcoming stakeholder forums in December. While the AEMC has been tasked with delivering rule recommendations by the end of 2022, we anticipate the need for ongoing discussions with the sector and the need for a further broad review of regulations over the medium to longer-term, particularly current and new trials are completed that will illuminate the various barriers to hydrogen and biogas uptake.

- *Integration with facilitated gas markets, transparency mechanisms and economic regulation*

For the foreseeable future, the production and transport of hydrogen, biogas and blends will be undertaken using business models that rely significantly on public subsidies or incentives. We therefore question whether it is worth spending effort understanding various complexities and drafting detailed rules and procedures to accommodate things like access to markets, data reporting and forms of monopoly infrastructure regulation that typically apply to commercial entities with significant demand for their products or services.

- *Should customers be able to 'opt-out' of receiving a natural gas equivalent*

Customers have limited capacity to refuse participation in trials for the inclusion of natural gas equivalents, if they were provided an opportunity to 'opt-out' how would this be facilitated? Would the network be able to restrict the inclusion of natural gas equivalents at a meter level? Or would responsibility fall on the retailer to ensure the customer had no change to their billing, despite the customers property participating in the trial?

The complexities of enabling the ability for customers to opt-out are likely to be overly restrictive, therefore the preferable option remains with networks requiring majority support for any trials they conduct, and to support customers that are concerned about impacts from the trials. This should apply in jurisdictions with or without a diverse range of retailers, as it will be a network's decision to conduct/allow a trial, regardless if they are the producer or shipper of the natural gas equivalent.

Prior to any enabling customer choice by way of opt-in, and presuming natural gas equivalents reach retail economic viability and achieved widespread distribution, there will need to be a comprehensive communications campaign, led by jurisdictional governments, explaining costs, green credentials and addressing any safety concerns.

- *Should retailers be able to sell natural gas equivalents to customers*

If producers of natural gas equivalents are able to provide a consistent and marketable product, then retailers should be able to procure and on sell this to their customers. However, there must be caveats protecting the customers on the network that have not agreed to purchase the natural gas equivalents.

The AEMC's review suggests that injection will be restricted, limiting the specifications to that of a 'natural gas equivalent', it is then reasonable to assume that customers will not be using the supply for the specific hydrogen or other renewable gas components. Therefore, any customer consideration for purchasing a natural gas equivalent would be to achieve a positive value prospect, compared against the potential risks to their appliances from accepting a natural gas equivalent.

This suggests the primary driver would be the natural gas equivalent is cheaper or preferential because it is a 'greener' alternative. Both drivers are unrealistic in natural gas equivalent trial stages, with hydrogen's forecast prices remaining uneconomical, and any 'greener' credentials not readily verifiable. EnergyAustralia does not believe it is realistic that customers will tend to request a natural gas equivalent during the preliminary or trial stages.

Furthermore, we are concerned that by enabling retailers to sell natural gas equivalents to customers, any negative consequences can be perceived as the responsibility of a retailer. Fundamentally, we believe that responsibility for natural gas equivalents should predominantly be associated to the parties driving the inclusion, whether that be producers, networks, or shippers/retailers.

- *Applicable costs, notification requirements, and billing of customers receiving natural gas equivalents*

Customer's views are considered in the decision-making process of networks that are considering trial of natural gas equivalents, normally restricted to a small committee. Where a network has deemed approval for commencing a trial, the network should notify all customers that may be impacted, with clear advice on the process, potential impacts, and options for raising and questions/concerns.

To ensure adequate advice is provide to customers, retailers should also be a conduit for information regarding the inclusion of natural gas equivalents. Retailers should notify customers in their Market and Standard Retail Contracts, and via their customer billing, where they may be receiving a natural gas equivalent, and advice directing customers to their networks for any concerns or questions relating to the inclusion.

To ensure this information is targeted and to avoid unnecessary concern, retailers will require a method to identify when a natural gas equivalent has been incorporated into a customer's supply. During preliminary trial stages the percentage of natural gas equivalent inclusions will be minimal across a distribution network, this will create inaccuracies with notifying customers about the quantum of natural gas equivalent they are receiving.

This will impact customer satisfaction, as they will be unable to accurately compare impacts to their consumption before and after they began receiving natural gas equivalents; this is without considering the impacts to metering accuracy from receiving these blends. In the trial period retailers will need to be informed about the customers that are expected to be impacted, and for any customers that are

concerned about the ramifications from the natural gas equivalents, they should be able to contact the retailer to request the network investigate the perceived concern, free of charge.

EnergyAustralia's preference is that any trial of natural gas equivalents should not result in an increased price to customers, with this cost absorbed by the party responsible for the trial. If natural gas equivalents progress beyond a trial phase, customer billing should reflect – to the extent it is known – the specific price impacts, resulting from any change in heating value or impacts to recorded consumption resulting from inclusion of the natural gas equivalent.

In a hypothetical future, where natural gas equivalents are a common supply mix, and customers are aware of the product and actively procuring it from retailers, how the price for this product is presented to the customer should remain a retailer decision. As evidenced in the difficulties of separating the cost of electricity produced from renewable and non-renewable sources, it is foreseeable that natural gas equivalents would similarly be presented as a single 'natural gas equivalent' price. Retailers understand customer preferences and can consider how to best express the costs associated for natural gas equivalents.

- *Metering of customers receiving natural gas equivalents*

A prerequisite of any consideration for including natural gas equivalents is the efficacy of customer metering. The ability for metering to record consumption accurately is fundamental to retailer billing, market settlement, and most importantly customer billing acceptance and satisfaction. We support the AEMC's assessment of the required amendments to metering:

- *that existing gas chromatographs be tested and, if required, recalibrated, modified or replaced, to ensure they can measure the heating value of natural gas equivalents throughout the distribution systems; and,*
- *changes to the metering requirements in relevant jurisdictional instruments to ensure that gas monitoring systems on distribution systems can accurately measure the energy content of natural gas equivalents at different times and locations.*

EnergyAustralia requests that any changes to regulation following this review be reliant on confirmation that existing metering is suitable for receiving and accurately recording natural gas equivalent consumption. If not, that any changes to regulation are postponed until the appropriate regulatory determination processes can be completed to confirm customer's acceptance of the investment required to replace existing metering.

- *Regulatory determinations, access arrangements, ring-fencing and liability*

Regulatory network determinations and access arrangements must be considered in this review, ensuring appropriate regulatory scrutiny for enabling natural gas equivalents will limit the risks that roles and responsibilities are not clear for the quality and safety of supply of natural gas equivalents to consumers, and will ensure that network's proposed changes are targeted, fit for purpose and proportionate to the issues they are intended to address.

As a priority, we encourage the AEMC to identify and address any barriers to establishing and sharing knowledge from gas blend trials involving gas distribution networks. This would include reviewing the sufficiency of sandboxing arrangements.

The regulations governing how the Australian Energy Regulator assess networks proposed expenditure is crucial when considering the complexities of calculating long run marginal costs for the inclusion of natural gas equivalents, ensuring this is supported by customer's preference, and constrained where there are ring-fencing and other cross subsidisation risks. The AEMC's review has identified the need for this consideration:

'If the transition is not mandated, the regulator would need to assess the proposed expenditure having regard to the expenditure criteria in the NGR.

A service provider that wanted to transition to transporting a natural gas equivalent but was not required to do so by a jurisdiction, would need to show that the proposed expenditure is "such as would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice to achieve the lowest sustainable cost of providing services". It would also need to show that any proposed capital expenditure is justifiable because either:

- *the overall economic value is positive*
- *the present value of incremental revenue exceeds the present value of the expenditure.'*

The AEMC's proposed amendments to the National Gas Law to extend ring-fencing provisions to the facilities and activities involved in the production, purchase and sale of natural gas equivalents and their constituent gases, has considered the perceived risks of network businesses inappropriately or inadvertently recovering costs through regulated charges.

As a further safeguard for the risks identified in the ring-fencing proposed changes, EnergyAustralia believes the review should consider if there are appropriate mechanisms for how networks calculate, consult, and obtain approval of feasibility studies or trials to incorporate natural gas equivalents. This will help to ensure that any costs associated with these activities are appropriately assigned to the party with the greatest benefit; absorbed by networks when they are investigating new business models (e.g., where they are the producer or shipper of natural gas equivalents) or applied as network pass through charges if beneficial to customers.

The AER's recent information paper¹ canvasses the above issues in terms of whether it has the discretion and appropriate guidance under the rules to approve network expenditures associated with research and development type activities, where customer benefits are highly uncertain. It also raises the need for appropriate ring-fencing arrangements that provide for visibility of costs of hydrogen and biogas production by regulated networks as part of trials, as well as arrangements that facilitate trials initiated by unrelated entities that require use of the gas distribution network.

Finally, the review should consider that liability for gas specification, blending, and gas quality when it is injected into a distribution network should be updated in access arrangements or transposed into the National Gas Rules. EnergyAustralia believes this should reflect that the responsibility for any liability resulting from gas specification, blending, or the quality of natural gas equivalent injection is solely that of the party injecting the gas into the distribution network; existing Reference Service Agreements place the liability on the shipper of the gas, a party that only has contractual agreements with gas producers to ensure compliance with requirements.

¹ <https://www.aer.gov.au/news-release/aer-tackles-gas-pipeline-regulation-in-an-uncertain-future>

If you would like to discuss this submission, please contact me on 03 9060 1361 or Travis.Worsteling@energyaustralia.com.au.

Regards

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