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Energy Senior Officials  
Department of Industry, Science, Energy & Resources  
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**Energy Senior Officials – Extending the national gas regulatory framework to hydrogen blends and renewable gases – Consultation paper – 21 October 2021**

EnergyAustralia is one of Australia's largest energy companies with around 2.4 million electricity and gas accounts across eastern Australia. We also own, operate and contract a diversified energy generation portfolio across Australia, including coal, gas, battery storage, demand response, wind and solar assets, with control of over 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. As Officials would be aware, 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.

We recognise the desire of Ministers to act upon recommendations from the 2019 Hydrogen Strategy to review a range of technical, economic, regulatory and legal barriers to hydrogen uptake. We support this recommendation, with an emphasis on technical and economic barriers as these will be critical to understanding where and how far hydrogen can play a role as part of the energy transition. We also note Ministers recently agreed to expedite consideration of how low-level gas blends, suitable for consumption in existing appliances, can be integrated into the national gas regulatory framework.

To this end, we support the distinction Officials have made in its policy paper between natural gas equivalents (NGEs), constituent gases, and other gases which are not suitable for end use consumption without transformation of infrastructure and appliance assets. That is, Ministers are currently interested in the regulatory treatment of NGEs that can be used without adaptation, as Officials have defined them. This is an important distinction in terms of the scope and prioritisation of issues in this review.

Our current view is that it is highly unlikely that large scale reticulation of hydrogen or renewable blended gases to mass market customers will be cost effective such that broad ranging regulatory requirements will be justified. Technological breakthroughs will be necessary if these gases can be produced at a cost that is sufficiently low to offset



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end use appliance change-over and network upgrades on a long-term, system-wide basis. This is the reason, for example, Ministers have determined to not pursue hydrogen blends via transmission pipelines, pending resolution of embrittlement issues. With such cost and technical barriers difficult to resolve, substantive decarbonisation should come about via the electrification of residential and small business loads, and some proportion of the commercial load, leaving a significant amount of gas infrastructure unutilised. Policy decisions enabling the trend towards electrification include the banning of new gas connections in the ACT and the Victorian Government's Gas Substitution Roadmap. These and similar events have prompted the AER to release an information paper on dealing with demand risk for regulated gas networks.<sup>1</sup> AEMO's next Integrated System Plan (ISP), to be finalised in June 2022, will for the first time explore long-term energy system scenarios involving hydrogen and sectoral electrification, and the cost impacts of these different scenarios will be subject to ongoing public discussion, with associated policy ramifications.

In such a state of uncertainty, a full review of regulatory frameworks beyond NGEs would be premature. For example, the prospects of requiring economic regulation, market integration and regulatory reporting for 'constituent' gas seem unlikely for the foreseeable future. Under the timelines proposed by Officials, recommended amendments to laws and regulations by the end of 2022 to deal with these issues will be superseded by improved public knowledge arising from gas blend trials, which have only recently commenced, and periodic analyses like the ISP. Having to revisit any recommended amendments, or make future rounds of amendments, will involve wasted resources.

Similarly, future-proofing frameworks to accommodate "other" gases which, by definition, will involve material cost impacts on customers and changes to physical infrastructure, does not appear necessary at present, and will distract from other important reforms being considered in the energy market. This includes the further paper released by Officials on 15 November regarding the Wallumbilla supply hub and capacity trading framework.<sup>2</sup> Officials consulted on a broad range of gas market transparency measures in late 2019, which we consider will make material improvements to market efficiency, however final rule and law amendments are still forthcoming, with the final RIS published in March 2020.<sup>3</sup> Across the wider energy framework, the AEMC has now deferred significant parts of its 2022 work program<sup>4</sup> to focus on key ESB-led reforms and we recommend Officials similarly reconsider the timing and scope of its review for gas blends in light of Ministers' priorities for the energy market.

To be clear, we consider the barriers to hydrogen and renewable gas should be explored and removed where appropriate, however technical and economic issues, not legal barriers, are most critical. Issues associated with safety and cost, as well as social licence, will be best explored through trials of low-level gas blends. To the extent there are legal and regulatory barriers to conducting and sharing knowledge from such trials, these should be addressed by Officials as a priority. It may also be the case that existing 'sandboxing' arrangements are insufficiently flexible to accommodate more or other

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

<sup>2</sup> <https://www.energy.gov.au/news-media/news/wallumbilla-gas-supply-hub-and-pipeline-capacity-trading-framework-consultation>

<sup>3</sup> <https://www.energy.gov.au/government-priorities/energy-ministers/energy-ministers-publications/measures-improve-transparency-gas-market-decision>

<sup>4</sup> <https://www.aemc.gov.au/news-centre/media-releases/new-sequence-deliver-priority-work>

types of trials and again we support this being investigated with stakeholders on a case-by-case basis.

We also encourage Officials to explore the issues raised in the AER's recent information paper, including whether it is able to approve expenditures on gas blends, including research and development activities, where this is not least cost or where benefits are highly uncertain. The AER also poses fundamental questions around the allocation of infrastructure stranding risk arising from decarbonisation policies, which must be addressed by governments, and as a priority, in order to provide certainty for customers and gas infrastructure providers.

In line with the above comments, our feedback on the main sections of the Officials' consultation paper are as follows:

- **General approach to reviewing Laws and regulations** — the starting presumption is that NGEs, involving low level blends, can be accommodated within existing infrastructure without material physical impacts or cost, and that associated infrastructure would be used for the same purposes and have similar characteristics as for natural gas currently. On this basis it would be a low-risk and logical approach for Officials to consider “extending” existing legal provisions to accommodate NGEs. Priority areas for review include those mentioned in the paper:
  - ensuring trials of low-level gas blends, initiated by private entities, are able to continue in order to inform the technical and economic feasibility of larger scale operations
  - roles and powers around gas specification and liability
  - ensuring frameworks enable transparency of costs associated with NGE production and blending facilities, which might include associated government contributions, and other means for consumers to have visibility and potentially consent to paying for such activities.
- **Constituent gases** — the same logic for extending provisions to accommodate NGE might apply to constituent gases, for example, the need for third party access to new types of natural monopoly infrastructure as identified in the paper. However, we do not consider this should be within scope or a priority for this review. Dedicated infrastructure for hydrogen and renewable gases will only come about via significant government funding or direct public ownership for the foreseeable future. As such, we question whether things like lack of access to markets, which involve resource allocation via price signals and private contracting, are a credible barrier to such facilities being constructed and utilised. Without significant market demand for NGE and constituent gases, there will be minimal public benefits in imposing mandatory reporting of data to the market and regulators, or in enabling third party access to infrastructure.

While not necessarily a result of the enabling legislative changes, we would be concerned if regulated gas network businesses were to attempt to recoup costs of constituent gas pipelines and production facilities by seeking to have them subject to economic regulation. For similar reasons (and also applicable in the case of NGE activities) appropriate ring-fencing should be imposed to avoid

customers paying for unregulated production, blending and transport activities via regulated network charges.

- **The powers of market bodies and gas specification** — risks and liabilities associated with gas specification is a key issue that should be resolved as a priority, including for trial projects, and ahead of other framework elements canvassed in the paper. The potential role of AEMO in monitoring gas composition is one option to resolve this however Officials should review how gas specification is treated under various reference service agreements, which is not uniform and can be streamlined.
- **Issues specific to the NERL** — as above, considering the extension of existing provisions to NGE is an appropriate approach. As identified in the consultation paper this is less complex than NGL considerations given constituent gases are out of the NERL's scope.
- **"Future proofing" for other gas products** — we consider it is premature to develop a comprehensive set of legislative or rule amendments to accommodate 'other' gas blends that would, by definition, require material changes to physical infrastructure and associated costs to consumers. The threshold of considering these matters as listed in the paper, in terms of Ministers being satisfied there are no unintended consequences in doing so, should reflect that it is not a costless exercise on its own. In particular, a direct "unintended consequence" of reviewing these matters would be to distract stakeholder and official resources from more important reform priorities to be considered over 2022.

If you would like to discuss this submission, please contact me on 03 9060 0612 or [Lawrence.irlam@energyaustralia.com.au](mailto:Lawrence.irlam@energyaustralia.com.au).

Regards

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