Review into extending the regulatory fameworks to hydrogen and renewable gases

STAKEHOLDER FEEDBACK TEMPLATE

The template below has been developed to enable stakeholders to provide their feedback on the questions posed in the consultation paper and any other issues that they would like to provide feedback on. The AEMC encourages stakeholders to use this template to assist it to consider the views expressed by stakeholders on each issue. Stakeholders should not feel obliged to answer each question, but rather address those issues of particular interest or concern. Further context for the questions can be found in the consultation paper.

SUBMITTER DETAILS

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DATE: 2 December 2021

PROJECT DETAILS

NAME OF RULE CHANGE:	**Review into extending the regulatory frameworks to hydrogen and renewable gases**
PROJECT CODE:	EMO0042
PROPONENT:	Energy Ministers
SUBMISSION DUE DATE:	2 December 2021

QUESTION 1 – CHAPTER 1 – INTRODUCTION

1. Do you agree with the Commission's preliminary position on the scope of this review?	The consultation refers to two categories of new products that it seeks to regulate—namely, 'natural gas equivalents' (NG Equivalents) and 'other gas products' (OG Products)—without detailed discussion of the likely technical specification of these products. The designation of hydrogen blends up to 10% as NG equivalents is not accurate, noting that hydrogen blends quickly diverge from current gas specification even at low levels of concentrations (especially regarding volume and heating value). AGL notes that NG Equivalents should be restricted by their adherence to current physical and chemical limits of existing natural gas specification, including heating values, density, Wobbe Index, etc. Liability for exceedance of these limits should be considered under the new regulatory regime as there are likely to be downstream impacts on users, including potential billing and safety issues. AGL suggests any review of the regulatory framework is undertaken on the basis that any gas that is different to the natural gas specification, particularly hydrogen, will have different physical and chemical characteristics as they are not equivalents.
2. Are there additional areas in the NGR or NERR that should be excluded or included in the current review? If so, why?	The intention of the NGR and the AEMC's rule-making process is to deliver the Natural Gas Objective, which only relates to natural gas and not constituent products or blended products. AGL recognises this fundamental issue may make the economic regulation of products other than natural gas very challenging for the AEMC, but we consider this should be addressed clearly in any changes to the legislation and/or rules governing natural gas. Further policy direction is required from jurisdictional officials to adequately address this disconnect and ensure that the review reflects the differences in these gases and focuses on the protection of consumers and end-users. AGL suggests that perhaps the development of new products may be improved through a separate regulatory framework, rather than treating blended products in the same way as natural gas.

QUESTION 2 – CHAPTER 2 – ASSESSMENT FRAMEWORK

3. Do you agree with the Commission's proposed assessment framework for this review?	AGL believes the immediate focus should be on assessing technical and economic barriers of hydrogen injection into gas networks rather than changing the framework for natural gas when regulatory sandboxing trials is an appropriate and available immediate solution.
4. Are there any criteria the Commission should or should not consider as a part of its assessment framework??	No comment.

QUESTION 3 – CHAPTER 3 – SUPPLIER ACCESS TO PIPELINES

5. Do you think that any additional guidance is required in the NGR to deal with connections by suppliers of natural gas equivalents or constituent gases, or are the new draft interconnection rules sufficient? If you think additional guidance is required, please set out what guidance you think is required.	Today, Gas Reference Service Agreements (RSA's) place the onus for gas quality is on the purchaser/ shipper/ retailer. Connections by suppliers of NGE's would reasonably require this be removed from the RSA and the responsibility for any gas (including NGE) be upon the party responsible; being either the producer or the party allowing the injection.
6. Do you think service providers should be required to publish information on where connections by suppliers of natural gas equivalents or constituent gases would be technically feasible, or should this just be left to negotiations?	This information would help to enable the development of connections for NGE's and constituent gases.
7. Do you think that any specific rules are required in the NGR to deal with the risk that service providers may favour their own natural gas equivalents or constituent gas facilities by curtailing other facilities ahead of their own, or do you think this should be dealt with through ring-fencing arrangements?	At a minimum, there should be ringfencing arrangements employed when pipeline/network entities are the ones providing the gas blend into the networks. Detailed consideration of how to ensure that these providers do not have priority with scheduling merely because they are a subsidiary or related body corporate to the pipeline in question is a key component of this consultation.

QUESTION 4 – CHAPTER 3 – RING-FENCING ARRANGEMENTS

8. Do you think the ring-fencing exemptions in the NGR should be amended to accommodate trials by service providers? Why?	No comment.
9. If so, do you think there should be any limit on the volume service providers should be able to producer, purchase or sell (e.g. up to the unaccounted for gas level)?	No comment.

10. Do you think any other changes need to be made to the ring-fencing provisions in the NGL or NGR to accommodate natural gas equivalents or constituent gases?	Ring-fencing provisions are important and a vital part of ensuring adequate competition however due to the expedited nature of this review AGL has not had adequate time to consider specific changes that would need to be made. AGL suggests that this is discussed in a workshop forum or further explored by the AEMC.

QUESTION 5 – CHAPTER 3 – RULES FOR SCHEME PIPELINES

11. Do you think Part 9 of the NGR should be amended to provide the regulator with additional guidance on how to assess service provider proposals to transition to natural gas equivalents in those cases where a jurisdiction does not mandate the transition? If so, please explain what changes you think need to be made and why.	No comment.
12. Do you think Part 9 of the NGR should be amended to clarify how government grants or funding are to be treated for regulatory purposes?	No comment.
13. Do you think any of the other rules that will apply to scheme pipelines under the new regulatory framework need to be amended to accommodate pipelines hauling natural gas equivalents or constituent gases?	No comment.

QUESTION 6 – CHAPTER 3 – RULES FOR NON-SCHEME PIPELINES

14. Do you think the arbitration principles applying to non-scheme pipelines should be amended to: a) require the arbitrator to take into account any regulatory obligation that a pipeline may be subject to? b) provide the arbitrator with greater guidance on how to assess proposals by a service provider to transition to	No comment.

transporting a natural gas equivalent where the transition is not mandated? c) clarify how government grants are to be treated?	
15. Do you think any of the other rules that will apply to non-scheme pipelines under the new regulatory framework need to be amended to accommodate pipelines hauling natural gas equivalents or constituent gases?	No comment.

QUESTION 7 – CHAPTER 3 – PIPELINE GAS INFORMATION

16. Do you think service providers should be required to publish information on: a) the type of gas they are licensed to transport in their user access guides and, in the case of scheme pipelines, the access arrangement and access arrangement information? Why? b) any firm plans to conduct either a trial or to transition the pipeline (or part of the pipeline) to a natural gas equivalent or other gas product? Why?	For transparency and to assist retailers in managing their customers, providers should be required to publish information on firm plans to conduct a trial or transition the pipeline.
17. Do you think this information should also be reported on the AEMC's Pipeline Register?	Yes.

QUESTION 8 – CHAPTER 4 – EXTENSION OF THE TRANSPARENCY MECHANISMS TO NATURAL GAS EQUIVALENTS

18. Except for blending facilities are there any other facilities or activities involved in the supply or use of natural gas equivalents that are not already captured by: c) the BB facilities listed in rule 141 of Part 18 of the NGR? d) the DWGM registration categories in rule 135A of Part 15A of the NGR?	No comment.

19. If the information to be reported by facilities involved in the production, transportation, storage, compression and or use of natural gas equivalents is to be based on the information reported by their natural gas counterparts, are any amendments required to reflect differences in the physical characteristics of these facilities compared to natural gas facilities for: a) the Bulletin Board reporting obligations in Part 18 of the NGR? b) the GSOO content in rule 135KB of Part 15D of the NGR? c) rules 323-324 in Part 19 of the NGR? d) the compression and storage reporting obligations in Part 18A of the NGR? e) the price information to be published by the AER in proposed rule 140B in Part 17 of the NGR?	AGL considers that because of the significant volume difference and impact on other participants, smaller quantities of blend should be reportable. Especially considering retailers who provide gas to customers but have little control over what is actually delivered need clarity on the products and the composition of the produce being provided.
20. Should blending facilities be treated as production facilities for the purposes of the Bulletin Board, GSOO and VGPR, or should specific reporting obligations be developed for these facilities? Why? If you think specific reporting obligations are required, what should these be?	No comment.
21. Are there any other gaps in the NGR that have not been identified that would need to be addressed if the five transparency mechanisms were to be extended to natural gas equivalents? Why? If you think there are other issues, what are they and what amendments are needed?	No comment.

QUESTION 9 - CHAPTER 4 – EXTENSION OF THE TRANSPARENCY MECHANISMS TO CONSTITUENT GASES

22. Do you think the following transparency mechanisms should be extended to the facilities and activities involved in the supply of constituent gases as part of the initial rules package or should the application of one or more be deferred until a later process? Why? A) The Bulletin Board B) The GSOO C) The VGPR D) The compression and storage terms and prices E) The AER's gas reporting functions.	Yes.
23. If you think the transparency mechanisms should be extended as part of the initial rules package: a) What facilities do you think need to be captured? b) Do you think the facilities and activities involved in the supply of constituent gases should be subject to equivalent reporting obligations as their natural gas counterparts, or are some modifications required to reflect differences in the physical characteristics of these facilities?	Yes they should be extended as part of the initial rules package if they meet the requisite thresholds and are not subject to regulatory sandboxing arrangement.
24. Are there any other gaps in the NGR that have not been identified that would need to be addressed if the transparency mechanisms were to be extended to constituent gases? Why? If you think there are other issues, what are they and what amendments are needed?	No comment.

QUESTION 10 - CHAPTER 5 – TRADING NATURAL GAS EQUIVALENTS IN THE FACILITATED GAS MARKETS

25. Do you think natural gas equivalents should be traded through the facilitated markets, or outside of the facilitated markets?	If the natural gas equivalent will be eventually sold to end users then they should be traded through the facilitated markets like natural gas.

26. What do you consider are the implications of these two options, in terms of required regulatory changes, costs of implementation and potential market inefficiencies?	No comment.

QUESTION 11- CHAPTER 5 – FACILITATED MARKETS REGISTRATION CATEGORIES

27. If natural gas equivalents are to be integrated into the facilitated markets, are new registration categories required to accommodate facilities and participants involved in the creation of these products, including through the injection of blends into the distribution system?	Yes, a new registration category with the requisite obligations commensurate to a highly flammable gas blend should be introduced. While accommodating new products within the existing gas specification is a sensible starting point from which to approach a regulatory framework for new gas products, much more caution should be exercised when describing new gas products as NG Equivalents, even where those new gas products contain constituent products at low concentrations. Natural gas equivalents are not natural gas, and this is especially true of hydrogen. The impact of these differences is likely to be material at scale, especially when considering the ambitious hydrogen targets currently being considered in Australia. Separate regulatory categories should be established to differential between the two gases/gas mixes.
28. If flows associated with distribution-connected blending facilities are not scheduled in facilitated markets, are new registration categories required for blending facilities and associated participants or can they be exempted from registration?	They will need to be scheduled in come capacity to enable adequate settlement.

QUESTION 12- CHAPTER 5 – UNACCOUNTED FOR GAS IN THE FACILITATED MAKRETS

29. Do you think initial trials involving the injection of natural gas equivalents into the distribution system should be accommodated by amending jurisdictional arrangements for UAFG?	Any amendment of the UAFG arrangements needs to be considered on a state-wide and/or pipeline basis for customer invoicing purposes.
30. f so, how will this impact the operation of the matched allocation mechanism (as used by the distributor in the Sydney STTM hub)?	Not only will it affect the matched allocation, but also the issue of line pack in the NSW trunk main as this will lead to additional issues as this gas is not factored into the market delivery / withdrawal processes.
31. What changes would be required to UAFG arrangements in the DWGM?	No comment.

QUESTION 13 - CHAPTER 5 – SETTLEMENT ISSUES IN THE FACILITATED MARKETS

32. If distribution connected blending facilities are not integrated into the facilitated markets, what settlement issues may arise?	There are a range of issues that could arise from this including issues with customer billing, problems with retail allocation and the UAFG calculation for wholesale settlement.
33. If distribution injections and corresponding end use consumption need to be excluded from settlement, how should excluded consumption be treated? What factors might affect this?	The exclusion of injections from settlement is a complicated consideration and needs to be explore further in detail.
34. If distribution connected blending facilities are integrated into the facilitated markets, are settlement issues in the STTM likely to be relatively straightforward to resolve? Why?	An option to consider would be the alignment of the settlement processes in the STTM to a uniform process.
35. How should facilities exempted from registration, or that fall below a materiality threshold, be treated under settlement arrangements in the facilitated markets?	No comment.

QUESTION 14 - CHAPTER 5 – METERING AND HEATING VALUES IN THE FACILITATED MARKETS

36. Does the NGR restrict distributors' ability to calculate heating values in different parts of the distribution system to accommodate the different uses of natural gas equivalent gases in the facilitated markets?	No comment.
37. Are amendments required to the NGR to facilitate the determination of more granular heating values and any other matters relating to the metering provisions for the DWGM?	Yes.

QUESTION 15 - CHAPTER 5 – GAS SPECIFICATION IN THE FACILIATED MARKETS

38. In relation to the STTM, do you think Part 20 of the rules should be amended to clarify that AS 4564 –	Yes Part 20 of the Rules should be amended but the gas standard should not be a fluid standard. There needs to be a firm standard applied to all parties to ensure that customers are

2005 can be augmented or replaced to accommodate blending in certain parts of STTM distribution systems? Are any other changes required, including to accommodate impacts on connected transmission pipelines?	supplied with a known specification of gas. This is especially important for commercial and industrial users. There should be no amendments that seek to dilute the importance of a full technical assessment of the gas standard to ensure safety and customer requirements are not put at risk.
39. In relation to the DWGM, do you think Part 19 of the rules should be amended to give AEMO (or another party) the ability to directly determine the gas specification on distribution systems?	Yes, and as noted above the specification should be applied uniformly to ensure customer safety.

QUESTION 16 - CHAPTER 5 – BLENDING CONSTRAINTS IN THE FACILITATED MARKETS

40. Who should be responsible for the creation of natural gas equivalent blends and ensuring that these remain consistent with a revised gas specification?	AEMO.
41. In the DWGM, should AEMO be given operational control over the distribution system to manage blending constraints? If so, what changes to the rules would be required?	No comment.

QUESTION 17 - CHAPTER 5 – OTHER IDENTIFIED ISSUES IN THE FACILITATED GAS MARKETS

42. Do the identified issues in the NGR and changes required cover all necessary changes to facilitate the trade of natural gas equivalents in the DWGM and STTM?	There has been inadequate time provided to determine this however additional clarification around how capacity would be allocated to participants and also how hydrogen or renewable gases facilities would be treated in the operational and market schedules, including impacts on prices is required. Specifically, the DWGM will require further consideration on the capacity credits mechanism coming into effect in 2023.
43. Are there any other issues the Commission should be aware of?	The reality of hydrogen injection at the moment being quite uneconomic for participants. The infancy of hydrogen blend trials and the lack publicly available information on the outcomes of those trials make it hugely difficult to adequately assess all of the potential regulatory risks from the proposed changes.

44. Are all of these changes required now for natural gas equivalents? Could some of these changes be made at a later date, or when other gas products are taken into consideration?	AGL suggests the use of regulatory sandboxing while a more comprehensive review of what is required is undertaken. This rushed approach is not suitable for such changes to the gas market.
45. Are there any transitional issues?	No comment.

QUESTION 18 – CHAPTER 6 – INITIAL IDENTIFIED ISSUES IN THE REGULATED RETAIL MARKETS

46. Are changes to the retail market registration provisions required to accommodate natural gas equivalents?	No comment.
47. Are there any other changes required to the retail market provisions in the NGR to accommodate natural gas equivalents?	No comment.

QUESTION 19 – CHAPTER 6 – OTHER POTENTIAL ISSUES IN THE REGULATED RETAIL MARKETS

48. Are there any issues the AEMC should consider in relation to the recovery of the cost of the renewable component of the natural gas equivalent from retail customers, for a natural gas equivalent?	Poor energy calculation is likely to lead to high increased customer complaints and billing issues which will be difficult to resolve
49. Are there any issues the AEMC should consider in relation to retail competition and consumer choice as a consequence of the introduction of natural gas equivalents?	There needs to be a consistent framework to apply to all market participants to enable competition.
50. How are these issues impacted by jurisdictional policies in relation to mandated renewable gas targets or mandated green value in a gas stream? Are any changes to the NGR and NERR needed, either now or in the near future, to address any concerns about competition, consumer choice and cost pass through of renewables in the retail market.	Jurisdictional policies for mandated renewable gas targets are difficult to manage when pipelines cross state borders and gas molecules are unable to be tracked.

QUESTION 20 - CHAPTER 7 – CONSUMER PROTECTION FRAMEWORK

51. Do you consider that changes are required to the consumer protection framework to reflect the physical properties of natural gas equivalents compared to natural gas? Specifically: a) Should retailers be required to notify existing customers prior to the transition from the supply of natural gas to a natural gas equivalent that the customer is now being supplied with the natural gas equivalent and the changes the customer may see in relation to the quantity of gas metered at their premises following the transition? b) Should the model terms and conditions for standard retail contracts and the minimum requirements for market retail contracts be amended to make clear if the supply of gas under that contract is a supply of natural gas or a natural gas equivalent? c) Should retailers who receive requests for historical billing data from a customer be required to state in the billing information provided if there was a transition from natural gas to a natural gas equivalent during the billing history period for which information is requested, and the date at which the transition occurred? d) If the natural gas equivalent to be supplied has a different heating value from natural gas, should there be a requirement for retailers to issue a bill based on an actual meter read for customers with accumulation (non-interval) meters before supply is transitioned to a natural gas equivalent?	Yes, there should be changes made to consumer protection framework to reflect the changes to natural gas as it is no longer a natural gas blend. Natural gas as currently produced, transported, and used by consumers, is a relatively homogenous product that is bound by strict technical specifications[1]. While natural gas varies in its composition, the fundamental properties of natural gas for use in Australia are well-established, closely monitored, and maintained to a very tight specification to prevent risks to public safety by the supply of off-specification gas, and further risks to public safety associated with curtailment of the injection, subsequent system disruption, and re-lights in gas consumer premises. In the absence of any adjustments, hydrogen blends will provide less energy for consumers at the same volume, leading to an increase in costs for participants that purchase gas on a volumetric basis (i.e., most customers). a) Any changes for existing customers should be communicated through gas distributors as they will be the ones with the metering data relating to the blends. b) Yes contracts should reflect whatever product is being provided to customers although there should be a time period under which changes can be made. c) This needs to be explored further as it will depend on the behaviour of the blending station. E.g. If blending facilities are on day 1 and off day 2, then the impact changes day to day as opposed to a blended product that flows every day. The appropriate calculation of heating values across the supply chain should assist with understanding this issue and the gas meteorology framework should flag when the natural gas equivalent blends are in the system. d) Again, the appropriate allocation and calculation of heating values should manage this issue. However, one area that will need additional consideration is for Tariff D where the heating value is calculated hourly in some areas or daily in others. The change to customers' energy mix must be highlighted and explained to them as there will inevitably be a change in their usage which will vary depending on how close they are to the blending facilities.
52. Are there any other gaps in the consumer protection framework that arise because of the difference in the physical properties of natural gas and natural gas equivalents?	No comment.
53. Do you consider that customers should be informed if price variations occur because of the transition to natural gas equivalents?	Yes.

54. How should the risks of 'off spec' natural gas equivalents be allocated under the NERL and NERR? Is the existing allocation of risk for the quality of natural gas appropriate if distributors have responsibility for creating the natural gas equivalent (for example, through the operation of blending facilities)? What is the appropriate mechanism for managing loss suffered by customers as a result of 'off spec' natural gas equivalents?	This needs to be explored further as retailers will have little to no control over what is actually delivered to their customers and end users.

QUESTION 21 - CHAPTER 8 – REGULATORY SANDBOX ARRANGEMENTS

55. Is it practicable for a retail customer to opt out of a change of product trial? If not: a) should the definition of explicit informed consent be required to provide information that the customer is unable to opt out of the trial for the period of the trial? b) should the AER have power to extend a change of fuel trial if retail customers cannot practicably opt out of the trial?	a) No because blends will be comingled, and the network can't separate customers except in large groups.
56. Are any changes to the consultation requirements regarding proposed trial waivers for change of product trials needed? For example, on the AER public consultation requirements for change of product trials.	Potentially but this needs to be explored further.
57. Should amendments be made to specify certain pre-conditions to the granting of a trial waiver for a change of product trial involving the sale and supply of an 'other gas product'? If so: a) should the applicant be required to provide this approval as part of its application for a trial waiver? b) should the rule change proponent for a trial rule be required to provide this approval as part of its request for the rule?	More consideration is needed on this issue.

58. Are there any other gaps that would arise in the proposed regulatory sandbox framework if it is extended to natural gas equivalents, other gas products and constituent gases?	The regulatory sandbox framework seems like a logical first steppingstone for the introduction of other gases into the natural gas networks.