



APA submission

Energy Ministers' Consultation Paper Extending the national gas regulatory framework to hydrogen blends & renewable gases

November 2021



Mr Sean Sullivan
Deputy Secretary
Department of Industry, Science, Energy and Resources

Lodged online

2 December 2021

RE: APA Submission to the Energy Ministers' Consultation Paper: Extending the national gas regulatory framework to hydrogen blends and renewable gases

Dear Mr Sullivan,

Thank you for the opportunity to comment on the Energy Ministers' Consultation Paper into the changes necessary to extend the national gas regulatory framework to accommodate hydrogen blends and renewable gases (Consultation Paper). We appreciate officials' ongoing engagement in relation to these important issues and support the proposed approach to accommodate renewable gases within the regulatory framework.

APA is an ASX listed owner, operator, and developer of energy infrastructure assets across Australia. Through a diverse portfolio of assets, we provide energy to customers in every state and territory on mainland Australia. As well as an extensive network of natural gas pipelines, we own or have interests in gas storage and generation facilities, electricity transmission networks, and over \$750 million in renewable generation.

The existing regulatory framework was introduced when gas networks and markets were well established. In contrast, the renewable gases industry is in its infancy and it is unclear how it will evolve. To help a competitive renewable gases market to develop, regulatory settings must be transparent and, where possible, consistent across jurisdictions. This will allow businesses like APA to invest with confidence in new technologies such as hydrogen and support the transition to a low carbon future.

If you wish to discuss our submission in further detail, please contact John Skinner on 02 9693 0009 or john.skinner2@apa.com.au.

Regards,



Peter Bolding
General Manager
Economic Regulation & Policy

1 Executive Summary

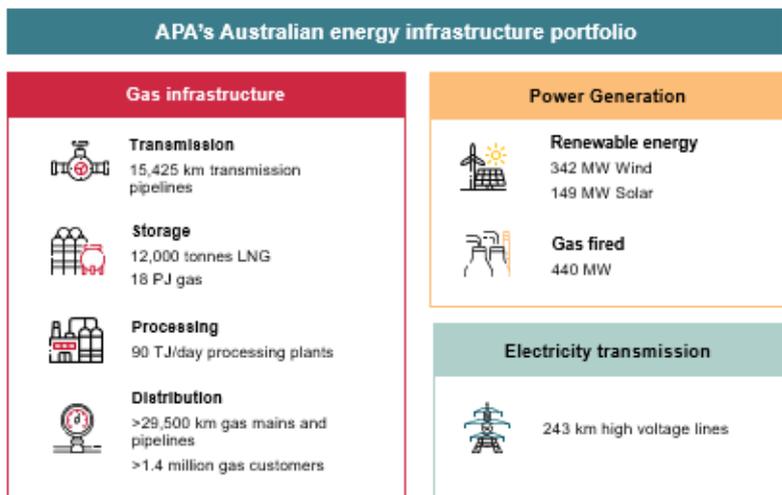
Key points

- APA supports the approach set out in the Consultation Paper of accommodating hydrogen blends and renewable gases through the new term 'natural gas equivalents' (NG equivalents).
- The hydrogen industry is very much in its infancy. There are many reasons why hydrogen pipelines and associated infrastructure are unlikely to demonstrate market power.
- We propose a more gradual approach to regulation that:
 - supports the development of the market for renewable gases and
 - applies regulation if there is evidence of market failure and the costs of imposing regulation do not outweigh the potential benefits.
- Greater consistency of arrangements across jurisdictions will help reduce red tape and should be one of the main objectives of any reforms.

APA is a leading Australian Securities Exchange (ASX) listed energy infrastructure business. Consistent with our purpose to strengthen communities through responsible energy, our diverse portfolio of energy infrastructure delivers energy to customers in every state and territory on mainland Australia.

Our 15,000 kilometres of natural gas pipelines connect sources of supply and markets across mainland Australia. We operate and maintain networks connecting 1.4 million Australian homes and businesses to the benefits of natural gas. And we own or have interests in gas storage facilities, gas-fired power stations.

Our investments include over \$750 million in renewable generation, making APA the 8th largest renewables investor in Australia. Our high voltage electricity transmission connects Victoria with South Australia and New South Wales with Queensland.



APA is supporting the transition to a lower carbon future. Our ambition is to achieve net zero operations emissions by 2050. Through our Pathfinder Program, we are investigating how hydrogen and other technologies such as batteries and microgrids, can support a lower carbon future.

We support the approach set out in the Consultation Paper of accommodating hydrogen blends and renewable gases through the new term 'natural gas equivalents' (NG equivalents). Extending the provisions in the NGL and NERL to NG equivalents will resolve any ambiguity about whether hydrogen blends and renewable gases fit within the regulatory framework.

Two aspects of the proposed approach set out in the Consultation Paper need to be carefully considered:

- the proposal to bring competitive upstream activities such as production and blending within the national gas regulatory framework. The Consultation Paper refers to these as 'related facilities and activities'.¹
- the proposal to 'future proof' the NGL and bring gases that are not currently suitable for use in natural gas appliances (other gas products) into the national framework once approved by relevant jurisdictions.²

The hydrogen industry is very much in its infancy. As explained in our submission below, there are many reasons why hydrogen pipelines and its associated infrastructure are unlikely to have market power. For this reason, we propose a more gradual approach to regulation that:

- supports the development of the market for renewable gases and
- applies regulation if there is evidence of market failure and the costs of imposing regulation do not outweigh the potential benefits.

Our submission also points out the importance of regulatory certainty when considering investment in long term energy projects. Where possible, greater consistency of arrangements across jurisdictions should be one of the main objectives of any reforms. National harmony will help reduce costs and red tape for many national energy businesses like APA.

Our submission to the Policy Paper is structured as follows:

- PART A contains the key issues we wish to raise in response to the Consultation Paper
- PART B contains answers to the questions for stakeholders.

¹ Energy Ministers Consultation Paper, October 2021, pviii

² Energy Ministers Consultation Paper, October 2021, p30

2 PART A – Key issues

2.1 Why do we regulate?

One of the key issues raised in the Consultation Paper is how constituent gases and other gas products could be brought within the scope of the national gas legislative framework. Before considering this question, it is useful to consider why regulation is imposed in the first place.

It is clearly preferable to avoid regulation where possible. Regulation increases uncertainty and the risk associated with investment, imposes additional costs, and has the potential to distort the operation of competitive markets. Nonetheless, governments and citizens recognise that there may be circumstances where regulation is appropriate to promote the interests of citizens, the economy, or the environment.

In the case of infrastructure assets, regulation is generally applied when there is evidence of market failure. For services provided by means of natural monopoly infrastructure, market failure could be demonstrated by a refusal to grant third party access or monopoly pricing. Both market failures could be evidence of market power on the part of the monopoly infrastructure owner.

We recognise that service providers are seeking clarity about the regulatory arrangements that will apply to infrastructure supporting the development of renewable gas markets. The question of when to apply regulation should be considered with these factors in mind.

2.2 The National Gas Framework and regulatory certainty

The national gas framework was established when gas infrastructure was decades old and there were many producers and customers of natural gas. In contrast, policy makers are now considering how regulatory frameworks should apply to infrastructure and markets that are in very early stages of development.

Governments across Australia have set net zero targets and gas infrastructure will play a key role in the decarbonisation of the economy. Businesses like APA wish to invest in energy projects that support this transition to net zero. While many of the projects currently being undertaken are demonstration or trial projects aimed at building renewable gas capability, larger projects will come online in future years on the pathway to a renewable gas industry.

It is essential that regulatory arrangements for renewable gas infrastructure are clear and transparent and support the efficient development of new infrastructure. Any regulatory uncertainty will affect the price at which capital can be sourced (the cost of capital) and deliverability of renewable energy projects.

Chapter 5 of the Consultation Paper outlines a potential approach to accommodating the supply of other gas products (OG products) that are not currently suitable for consumption in domestic appliances, in the NGL. In summary, the proposed approach is to amend the NGL so that jurisdictions can make regulations to bring the OG product and associated infrastructure, such as a pipeline or part of a pipeline, within the NGL. The Consultation Paper identifies three ways in which the local regulations could be made:³

- on a case-by-case basis when a pipeline is granted a licence to supply an OG product;
- a general regulation covering all specified gases, or classes of gases (e.g., all hydrogen blends other than NG equivalents); or
- a general regulation covering all gases unless excluded

In the early stages of market development, this approach risks creating uncertainty for gas infrastructure investors. This is because when undertaking early planning activities for a new infrastructure project, it may be unclear whether a proposed infrastructure project would be captured by the national gas framework. This might be the case, for example, where a jurisdiction is making regulations to cover new pipelines on a case-by-case basis.

Regulatory uncertainty is also created with the proposal to provide the AEMC with powers to make rules about:

- whether certain aspects of the gas framework (e.g., certain transparency measures) apply to OG products;⁴ or
- extending obligations under the Declared Wholesale Gas Market, Short Term Trading Market and Day Ahead Auction, to OG products.⁵

As far as practically possible, regulatory arrangements for capital investments must be clear *before* planning commences. A stable and predictable regulatory regime will help support investment in low carbon technologies, including renewable gases hydrogen.

2.3 Regulatory arrangements for natural gas equivalents and other gas products

2.3.1 Natural gas equivalents

As highlighted in the Consultation Paper, it is currently unclear as to whether hydrogen blends and renewable gases fit within the national gas regulatory framework.⁶

³ Energy Ministers Consultation Paper, October 2021, p30

⁴ Energy Ministers Consultation Paper, October 2021, p31

⁵ Energy Ministers Consultation Paper, October 2021, p32

⁶ Energy Ministers Consultation Paper, October 2021, p13

We support the approach set out in the Consultation Paper of accommodating hydrogen blends and renewable gases through the new term 'natural gas equivalents'. To ensure there is certainty about the extent of any changes, the new definition should build on the existing NGL definition of 'natural gas', including reference to the principal constituent component of methane. Extending the provisions in the NGL and NERL to NG equivalents will resolve any ambiguity about whether hydrogen blends and renewable gases fit within the regulatory framework.

The term 'NG equivalents' makes it clear that only gases suitable for consumption in existing natural gas appliances are covered within the regulatory framework. Given that natural gas pipelines are regulated under the national gas framework, it seems appropriate to regulate natural gas equivalents under the same set of regulatory arrangements.

In the short to medium term, it makes sense for the NGL, in its current form, to extend to NG equivalents. In the longer term, however, there are question marks about the future regulation of gas infrastructure in a changing energy landscape. In many competitive tender processes, particularly for mining and other large scale industrial processes, APA is already competing against other energy technologies such as diesel, renewable energy and batteries. This competitive tension is likely to increase in the future, reducing the market power of gas network businesses compared to other technologies.

The AER recognised this possibility in its recent information paper *Regulating gas pipelines under uncertainty*.⁷ The AER noted that if electricity becomes more competitive compared to natural gas, and switching costs become immaterial, sufficient competitive constraints may be placed on the price of gas pipeline services. Given the rapidly falling cost of renewable generation and storage, we agree that this is a likely outcome.

2.3.2 Other gas products

Regulators and policy makers around the world are considering whether regulatory frameworks should be extended to new gas products, particularly hydrogen.

The European Union Agency for the Cooperation of Energy Regulators (ACER) has recently considered this issue in its white paper: *When and How to Regulate Hydrogen Networks*.⁸ ACER concluded that flexibility is needed to decide when network regulation should be implemented. ACER proposed a gradual approach to the regulation of hydrogen networks in line with market development (see Case Study below).

⁷ AER, *Regulating gas pipelines under uncertainty*, November 2021, p61

⁸ ACER, *When and How to Regulate Hydrogen Networks*, February 2021

Case study: European Regulators' proposed approach to hydrogen regulation

In February 2021 the European Union Agency for the Cooperation of Energy Regulators (ACER) published a white paper titled: *When and How to Regulate Hydrogen Networks?* ACER observed that the gas and electricity networks were already established when current regulation was introduced. In contrast, the development of hydrogen infrastructure is still at an early stage and it is uncertain how it will evolve in practice. ACER therefore made the following recommendations for the possible regulation of hydrogen networks:

- **Flexibility** when deciding whether possible network regulation should kick in and a **gradual approach** to the regulation of hydrogen networks in line with market and infrastructure development
- Periodic **market monitoring** should inform a dynamic regulatory approach
- To provide certainty for investors, **regulatory principles** should set out the type of network regulation that will kick in, and under what circumstances
- **Exemptions** for local private hydrogen infrastructure should be considered to facilitate the development of new hydrogen infrastructure.
- **Value the benefits** of repurposing gas assets for hydrogen transport, recognising that the re-use of existing pipelines may be quicker and cheaper than building new hydrogen pipelines
- Apply cost-reflectivity to **avoid cross-subsidisation** between the gas and hydrogen network users.

Chapter 5 of the Consultation Paper outlines a potential approach to accommodating the supply of OG products that may in future be supplied to customers for use in suitable appliances, such as hydrogen, in the NGL.

The proposed approach would mean that once a jurisdiction has made a local regulation to bring the supply of an OG product within scope of the NGL, a pipeline carrying an OG product or its constituent gas would be a pipeline and so within the scope of the economic regulatory framework.⁹

This approach appears to give jurisdictions the power to bring a hydrogen pipeline within the scope of the NGL and economic regulation without an adequate assessment of whether there has been market failure. The Consultation Paper states:

*The new framework could be readily extended to pipelines involved in the haulage of constituent gases and it would appear appropriate to do so because these pipelines are **likely** to be natural monopolies and have a*

⁹ Energy Ministers Consultation Paper, October 2021, p31

*significant degree of market power, which **could** operate to the detriment of economic efficiency and consumers.¹⁰ [Emphasis added]*

In our view, a decision to subject a pipeline to economic regulation should be based on more than a possibility that a pipeline could exercise market power. As noted by the ACER white paper, the hydrogen industry is very much in its infancy and it is unclear how it will evolve. There are many reasons why hydrogen pipelines are unlikely to possess the market power that natural gas pipelines have historically possessed. These include:

- The cost of hydrogen means that it is currently uncompetitive compared to other energy sources. This means that the various parties in the hydrogen distribution and production chain will be incentivised to compete vigorously on price to secure customers.
- Compared to gas producers, who had few choices from where to source their gas, hydrogen producers have far more discretion about where to locate their electrolyser (with access to water being one of the few constraints). This means that hydrogen pipelines are likely to have significantly less market power than gas pipelines.

For these reasons, we support a more gradual approach to regulation that:

- supports the development of the market for renewable gases and
- applies regulation if there is evidence of market failure and the costs of imposing regulation do not outweigh the potential benefits.

This approach is consistent with the approach of international regulators and recognises that there is a great deal of uncertainty about the demand and supply of hydrogen and other renewable gases. The way the market takes shape, including the location and number of renewable gas suppliers, and the way they transport their product to market, will also influence the need for future regulation.

2.3.3 Related activities and facilities

We are concerned about the proposal to extend the national gas framework for both NG equivalents and OG products to 'related facilities and activities'.¹¹ This term covers facilities and activities from exploration and production through to retail supply.

In September 2021 Energy Ministers published a draft legislative package to give effect to the Gas Pipeline Decision Regulatory Impact Statement (Gas Pipeline DRIS) published in May 2021. The draft legislative package contained provisions extending

¹⁰ Energy Ministers Consultation Paper, October 2021, p22

¹¹ Energy Ministers Consultation Paper, October 2021, p16

the publication of individual prices to competitive markets without a transparent assessment of whether this is in the long-term interests of customers.

Energy Ministers' proposal to bring a much wider range of competitive activities within scope of the NGL raises similar issues. For example, there does not appear to have been a consideration of whether:

- Extending the Bulletin Board to a biomethane production facility is in the long-term interests of consumers, or
- The benefits associated with extending the AER's gas price reporting function and its power to collect price information outweigh the potential costs

The further expansion of the NGL into competitive upstream markets could have unintended consequences, and the potential costs of doing so should be carefully evaluated.

2.4 Jurisdictional harmony

Aspects of the proposed reforms risk increasing the disparity of approaches across jurisdictions. For example, under the proposed arrangements for OG products, it is possible that:

- A particular hydrogen blend will be approved in one jurisdiction but not another; or
- Part of a pipeline will be covered by the national gas framework in one jurisdiction, but not in another.

Where possible, greater consistency of arrangements across jurisdictions should be one of the main objectives of any reforms. National harmony will help reduce costs and red tape for energy businesses like APA.

APA would like to propose that a working group of the Commonwealth, State, Territory and industry representatives be established to consider and progress harmonisation of State and Territory regulations and the possible timing of their introduction. This will help ensure pipeline facility operators can maintain a functioning and cost competitive interstate grid services.

3 PART B – Responses to questions for stakeholders

Chapter 4: Extending the NGL and NERL to natural gas equivalents

No.	Questions	Feedback
Section 4.3: Potential approach to extending the NGL		
Section 4.2.1: Extension to NG equivalents and related facilities and activities		
1	<p>What are your views on the potential approach to extending the application of the NGL to NG equivalents and related facilities and activities? Are there any other approaches that you think would better achieve the objectives of Energy Ministers (see section E.3)?</p>	<p>Refer to section 2.3.3 of our submission above. We are concerned about extending the application of the NGL to NG equivalents and related facilities and activities without adequate consideration of whether this is in consumers' long-term interests.</p> <p>The term 'related facilities and activities' is defined in the Consultation Paper to cover facilities and activities from exploration and production through to retail supply.</p> <p>In the case of hydrogen, for example, in the absence of clear evidence of market failure, it is not clear why the regulatory framework set out in the NGL needs to extend to hydrogen production, storage, transportation and blending facilities involved in the creation of a blend and services provided by means of those facilities.</p>
2	<p>What are your views on the policy intention to enable all elements of the national gas regulatory framework to apply to NG equivalents and their related facilities and activities in the same way that they do to natural gas?</p>	<p>We support the policy intention to enable all elements of the national gas framework to apply to NG equivalents.</p> <p>In APA's response to the Decision Regulatory Impact Statement, we expressed concern that extending certain aspects of the framework to contestable markets, such as gas storage, without proper consideration of the costs and benefits, may not be in consumers' long-term interests.</p> <p>Similarly, we are concerned that the national gas framework is being extended to related facilities and activities without proper consideration of whether this is in customers' long-term interests (Refer to section 2.3.3 of our submission).</p>
3	<p>What are your views on the NGL requiring jurisdictions to make a local regulation to confirm when a gas or gas blend authorised for supply through a pipeline (or part of a pipeline) is an NG equivalent?</p>	<p>We are comfortable with jurisdictions confirming when a gas blend is an NG equivalent.</p>



No.	Questions	Feedback
4	Who is likely to operate the blending facilities involved in the creation of NG equivalent blends?	<p>There is considerable uncertainty at this early stage of the industry's development as to who is likely to operate the blending facilities involved in the creation of NG equivalents.</p> <ul style="list-style-type: none"> • It could become part of pipeline services and effectively regulated as either a reference or non-reference service. • It could also become a contestable service and therefore may need to be ring fenced. <p>It is prudent to ensure this remains open and unimpeded as to who is best to build, own and operate these facilities and not be restricted at this early stage.</p>
5	Do you think blending facilities should be subject to the same economic regulatory framework that applies to pipelines? Please explain your response to this question.	<p>It is too early to determine whether blending facilities should be subject to the same economic regulatory framework that applies to pipelines.</p> <p>If it becomes clear that blending facilities are a service that is most efficiently provided by pipeline service providers, then the economic regulatory framework should apply.</p>
6	Are there any specific physical characteristics of NG equivalents or the supply chain for these products that you consider should be taken into account when extending the natural gas regulatory framework to NG equivalents?	<p>Gas specifications should remain a national standard to facilitate cross border flows on interconnected transmission pipelines (e.g., the East Coast Grid).</p> <p>The infancy of the hydrogen and renewable gases industry in Australia means we don't have certainty of the flow dynamics within existing natural gas pipelines. Studies, including those by APA's Pathfinder Program, will inform this. However, the natural gas regulatory framework should not lock in these arrangements until such time as the physical characteristics and flow dynamics of NGEs are further informed.</p>
7	Are there any other observations you would like to make about the potential approach to extending the application of the NGL to NG equivalents and related facilities and activities?	N/A
8	Are there any other changes that you think need to be made to the NGL to accommodate NG equivalents and related facilities and activities?	No response



No.	Questions	Feedback
Section 4.2.2: Extension to constituent gases and related facilities and activities		
9	What are your views on the proposal to amend the NGL to enable the national gas regulatory framework to apply to the constituent gases and related facilities and activities involved in the supply of NG equivalents (where appropriate to do so) set out in section 4.2.2?	Refer to section 2.3.2 of our submission. In the absence of evidence of market failure, we do not consider that the NGL should be amended so as to apply to constituent gases and related facilities involved in the supply of NG equivalents.
10	What are your views on the proposal that pipelines involved in the transportation of a constituent gas (e.g. a hydrogen pipeline) be subject to economic regulation under the NGL and NGR?	Refer to section 2.3.2 of our submission. In our view, a decision to subject a pipeline to economic regulation should be based on more than a possibility that a pipeline could exercise market power. As noted by the ACER white paper, the hydrogen industry is very much in its infancy and it is unclear how it will evolve. There are many reasons why hydrogen pipelines are unlikely to possess the market power that natural gas pipelines have historically possessed.
11	Are there any other observations you would like to make about the potential approach to extending the application of the NGL to constituent gases and related facilities and activities?	No response
12	Are there any other approaches that you think would better achieve the objectives of Energy Ministers (see section E.3)?	Yes. We consider that the gradual approach based on evidence to regulation being proposed by the European Regulators to be a better approach. Refer to section 2.3.2 of our submission.
13	Are there any other changes that you think need to be made to the NGL to accommodate constituent gases and related facilities and activities?	No response
Section 4.2.2: Extension of market bodies' functions and powers		
14	What are your views on the potential approach to extending market body functions and powers set out in section 4.2.3 to: (a) NG equivalents and related facilities and activities? (b) constituent gases and related facilities and activities?	(a) We support market bodies being able to exercise their functions and powers with respect to NG equivalents just as they do with natural gas. (b) We do not support extending market bodies' functions and powers to constituent gases and related facilities and activities.



No.	Questions	Feedback
15	Do you think arrangements are needed for distribution pipelines attached to the DWGM and STTM to provide for independent management of blending limits (or gas specification requirement) imposed by a jurisdiction? If you think AEMO or another third party should be responsible for this function, please explain what costs and benefits you think would be associated with it doing so.	<p>APA does not support differing blending limits or gas specification requirements across jurisdictions or different markets. Australian gas markets are supplied by an interconnected East Coast grid traversing jurisdictions, supplying many different customers and operated by a number of different operators.</p> <p>By creating different specifications or blending limits this will impede the integrated system, creating complexities, costs and potentially perverse market outcomes for both investment and supply of gas or NGEs. Please refer to APA's submission to the AEMC and AEMO for further details on this position.</p>
16	Are there any other changes to market body functions and powers required to accommodate NG equivalents, their constituent gases, or related facilities and activities?	No response
17	Are there any other approaches that you think would better achieve the objectives of Energy Ministers?	We support the gradual approach to regulation of constituent gases as proposed by the European regulators. Refer to section 2.3.2 of our submission.
Section 4.3: Potential approach to extending the NERL		
18	What are your views on the potential approach to extending the application of the NERL to NG equivalents set out in section 4.3?	Given the NGL will be extended to NG equivalents, it makes sense to do the same for the NERL.
19	What are your views on the potential approach to extending the AER's and AEMC's functions and powers under the NERL to NG equivalents set out in section 4.3?	We support the proposed changes to allow the AER and AEMC to exercise their functions and powers to NG equivalents just as they do with respect to natural gas.
20	Are any other changes to the NERL or the market bodies' functions and powers under the NERL required to accommodate NG equivalents?	No response
21	Are there any other approaches that you think would better achieve the objectives of Energy Ministers (see section E.3)?	No response



Chapter 5: Accommodating other gas products in the NGL and NERL over time

No.	Questions	Feedback
22	What are your views on the potential approach to allowing the NGL to accommodate OG products over time, as described in section 5.1?	Refer to section 2.4 of our submission. Providing jurisdictions with the power to make local regulations which extend the NGL to OG products has the potential to increase uncertainty and complexity across jurisdictions.
23	Could amending the NGL in the manner described in section 5.1 lead to any unintended consequences? If so, please explain what those unintended consequences may be.	Yes. For example, it could be possible for an interstate hydrogen pipeline to be covered by the NGL in one state, but not another.
24	What are your views on the proposal to apply the economic regulatory provisions to pipelines involved in the haulage of OG products and their constituent gases?	In our view, a decision to subject a pipeline to economic regulation should be based on more than a possibility that a pipeline could exercise market power. As noted by the ACER white paper, the hydrogen industry is very much in its infancy and it is unclear how it will evolve. There are many reasons why hydrogen pipelines are unlikely to possess the market power that natural gas pipelines have historically possessed.
25	Are any other changes to the NGL required to accommodate OG products?	No response.
26	Are there any other approaches that you think would better achieve the objectives of Energy Ministers (see section E.3)?	Yes. We support the gradual approach to regulation of constituent gases as proposed by the European regulators. Refer to section 2.3.2 of our submission.
27	What are your views on the potential approach to allowing the NERL to accommodate OG products, as described in section 5.2?	No response
28	What are your views on the second potential approach to allowing the NERL to accommodate OG products, as described in section 5.2?	National consistency is preferred. The second approach, allowing jurisdictions to apply the NERL, risks increasing disharmony across the NEM.
29	Could amending the NERL in the manner described in section 5.2 lead to any unintended consequences? If so, please explain what those unintended consequences may be.	No response
30	Are any other changes to the NERL required to accommodate OG products?	No response
31	Are there any other approaches that you think would better achieve the objectives of Energy Ministers (see section E.3)?	No response



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