

Collated stakeholder feedback on Extending the national gas regulatory framework to hydrogen blends & renewable gases – review of the AEMO Procedures

General comments

Ref #	Participant	Comment	AEMO Response
1	AGIG	<p>Extending the national gas regulatory framework to hydrogen blends and renewable gases – review of the Procedures</p> <p>Australian Gas Infrastructure Group (AGIG) welcomes the opportunity to provide feedback on the Australian Energy Market Operator’s (AEMO’s) review of the Procedures.</p> <p>AEMO’s review along with the parallel reviews (by the Energy Officials and the Australian Energy Market Commission reviewing the National Gas Laws and Rules) is an important step forward in developing the foundations for a renewable gas industry in Australia by proposing to recognise renewable gases under the national gas regulatory framework.</p> <p>We are strongly supportive of the reform as it will support investment in projects that will not only reduce emissions for users of natural gas including in our gas networks, but also assist in increasing scale and driving down costs of hydrogen and other renewable gas projects.</p> <p>We consider that AEMO has broadly identified the Procedure changes necessary to facilitate natural gas equivalents in the Declared Wholesale Market, Short Term Trading Market and the retail markets in New South Wales and the Australian Capital Territory, Queensland, Victoria and South Australia. Our detailed responses to the consultation questions are found in Attachment A.</p> <p>About AGIG</p> <p>AGIG is the largest gas distribution business in Australia, serving more than two million customers through our networks in Victoria, Queensland, South Australia, and several regional networks in New South Wales and the Northern Territory. Our transmission pipelines and storage facility serve a range of industrial, mining and power generation customers.</p> <p>At AGIG, we are committed to sustainable gas delivery today, and tomorrow. Our Low Carbon Strategy targets 10% renewable gas in networks by no later than 2030, delivering 100% renewable gas developments from 2025, with full</p>	<p>AEMO notes AGIG’s support of the reform and that AGIG believes AEMO broadly to have identified the Procedure changes necessary to facilitate NGEs in the relevant markets.</p>

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		<p>decarbonisation of our networks by 2040 as a stretch target and by no later than 2050.</p> <p>We are now delivering on our strategy by deploying low carbon gas projects. Our most advanced projects include:</p> <ul style="list-style-type: none"> <li>• Hydrogen Park South Australia (HyP SA) – A 1.25MW electrolyser to demonstrate the production of renewable hydrogen for blending with natural gas (up to 5%) and supply to more than 700 existing homes in metropolitan Adelaide. HyP SA is now operational.</li> <li>• Hydrogen Park Gladstone – A 175kW electrolyser to demonstrate the production renewable hydrogen for blending with natural gas (up to 10%) and supply to the entire network of Gladstone, including industry. First production is expected in 2022.</li> <li>• The Australian Hydrogen Centre (AHC) – A virtual centre delivering feasibility studies for 10% and 100% blending of renewable hydrogen into towns and cities in South Australia and Victoria.</li> </ul> <p>Once again, I would like to thank you for the opportunity to feedback on AEMO’s review. Should you have any queries about the information provided in this submission please contact Drew Pearman, Head of Policy and Government Relations (drew.pearman@agig.com.au or 0417 544 731).</p>	
2	APA	[AEMO note: Due to its length, AEMO has not included APA’s general comments in the collated feedback. Please see the attached submission]	AEMO notes APA’s general comments.
3	Bioenergy Australia	Bioenergy Australia (BA) is pleased that procedures are being reviewed to extend the national gas regulatory framework to hydrogen and renewable gases. We are supportive of changes to enable injection of hydrogen and renewable gases but wish to emphasise the importance of developing a regulatory environment that is supportive of new project development, and not so restrictive that it stifles industry growth.	AEMO notes BA’s support of changes to enable hydrogen and renewable gases as well as of ensuring a regulatory environment that is supportive of new project development.
4	Energy Networks Australia	Energy Networks Australia (ENA) welcomes the opportunity to provide input during the consultation period on the proposed reforms to the National Gas Law (NGL) in relation to hydrogen and renewable gas blending. This submission is in response to	AEMO notes the ENA’s comments and support for the overall

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	<p>AEMO’s consultation paper on expanding the definitions in the procedures to support natural gas equivalent blends for the DWGM, STTM and retail markets.</p> <p>ENA is the national industry body representing Australia’s electricity transmission and distribution and gas distribution networks. Our members provide more than 16 million electricity and gas connections to almost every home and business across Australia.</p> <p>To date, the focus of decarbonisation has been on the electricity sector, but gas networks are on their own decarbonisation journey. Customers tell us that they are seeking a clean energy future and are engaged in achieving emission reductions from gas use. New renewable fuels, such as hydrogen and biomethane, have the potential to become mainstream and complementary energy solutions that will use existing energy infrastructure. Our gas networks are leading the development of renewable gas projects and blending renewable hydrogen in the Adelaide and Sydney gas distribution networks, with further projects under development in Victoria, Western Australia and Queensland.</p> <p>Package of regulatory reforms</p> <p>We understand that our response to the Paper is part of a broader package of reforms being considered under the Extending the national gas regulatory framework to hydrogen blends and renewable gases reform package. The broader package of reforms consists of several overlapping consultations, including:</p> <ul style="list-style-type: none"> <li>• Senior Energy Officials’ Consultation Paper on changes to the National Gas Law, National Energy Retail Law and Regulations,</li> <li>• The AEMC’s Consultation Paper on changes to the National Gas Rules and National Energy Retail Rules,</li> <li>• The AEMC’s Consultation Paper on a rule change request from the Victorian Minister for Energy, Environment and Climate Change to enable the inclusion of renewable gas facilities into the Victorian Declared Wholesale Gas Market, and</li> <li>• The AEMO’s Consultation Paper on changes to its procedures and other subordinate instruments.</li> </ul> <p>Gas distribution network service providers (DNSPs) are on a decarbonisation journey with the long-term objective to supply 100 per cent renewable gas in gas distribution networks for customers. Gas networks are actively developing and</p>	<p>reforms and the proposed changes to the STTM, DWGM and Retail Market Procedures.</p> <p>AEMO notes that the definition of pipeline service is in the NGL and so would require a law change. As such, this feedback may be better provided to the Officials’ review.</p>
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		<p>proceeding with renewable gas trial projects in order to build the capabilities necessary to effectively operate renewable gas-blended networks and 100 per cent renewable gas networks.</p> <p>ENA supports the overall objective of these reforms, which is to bring hydrogen blends, biomethane and other renewable gases within the scope of the national gas legislative and regulatory framework. These reforms will enable DNSPs to continue learning and innovating in the renewable gas space and progressing renewable gas options for customers.</p> <p>AEMO Topics</p> <p>The AEMO consultation paper focuses on expanding the definitions in the procedures to support natural gas equivalent blends for the DWGM, STTM and retail markets.</p> <p>ENA is supportive of these proposed changes.</p> <p>Unaccounted for Gas</p> <p>The current procedures assumes that UAFG amounts are met at custody transfer meter injections on the network.</p> <p>Until a commercial renewable gas market is established, DNSP are the most likely facilities to produce the renewable gas to produce the natural gas equivalent gas.</p> <p>Where appropriate, it would be beneficial if amendments to the pipeline service definition also ensured that DNSPs could capture production of renewable gases for the purpose of supporting a DNSP to deliver ancillary services. For example, this would allow DNSPs to meet their unaccounted for gas obligations with renewable gas.</p> <p>AEMO could identify what changes to the Procedures would be required.</p>	
5	ENGIE	<p>ENGIE Australia &amp; New Zealand (ENGIE) appreciates the opportunity to respond to the Australian Energy Market Operator (“AEMO”) in response to the Consultation paper on the Hydrogen blends &amp; renewable gases Procedures review (“the Consultation paper”).</p> <p>The ENGIE Group is a global energy operator in the businesses of electricity, natural gas and energy services. In Australia, ENGIE has interests in generation, renewable energy development, and energy services. ENGIE also owns Simply Energy which provides electricity and gas to more than 745,000</p>	<p>AEMO notes ENGIE’S support for AEMO’s review and that ENGIE agrees with the areas of change identified by AEMO and the decision to postpone most</p>

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	<p>retail customer accounts across Victoria, South Australia, New South Wales, Queensland, and Western Australia.</p> <p>Hydrogen is an important component of a future carbon free world</p> <p>ENGIE believes that hydrogen has the capacity to unlock the full potential of renewables and carbon-free energy solutions. It can accelerate the energy transition by allowing numerous green energy technologies to be used with much greater flexibility.</p> <p>ENGIE is committed to developing solutions based on renewable hydrogen, produced by electrolysis using a green energy supply. Hydrogen is the missing link for a decarbonised ecosystem, allowing for the harmonious progress of cities, territories and societies around the globe.</p> <p>ENGIE’s aim is to operate across the entire value chain of renewable hydrogen, from carbon-free power generation to the three key end uses: mobility, industry and energy storage.</p> <p>ENGIE is already partnering with governments and other businesses on trials, feasibility studies, and early commercial projects in order to develop the know-how that will allow the hydrogen sector to scale up quickly. This involvement has a global footprint, including projects in (amongst others) France, Singapore and Australia. Notably, ENGIE is project lead on one of the three ARENA-supported commercial-scale renewable hydrogen projects: a 10 MW electrolyser project to produce renewable hydrogen in a consortium with Yara Pilbara Fertilisers at their Karratha plant. ENGIE is also a partner in one of the other projects, a 10 MW electrolyser for gas blending at AGIG’s Murray Valley Hydrogen Park in Wodonga.</p> <p>In this light, we welcome AEMO’s publication of the Consultation. Clarity on the legal and regulatory status of hydrogen blends, biomethane, pure hydrogen streams and other emerging gas products is important for the development of these industries.</p> <p>AEMO’s scope and approach are appropriate</p> <p>ENGIE supports AEMO’s interpretation of the policy intent behind the review: i.e., that all elements of the national gas regulatory framework would apply to NG equivalents and their related facilities and activities in the same way that they do to natural gas. Given this review is proceeding in parallel with the jurisdictional Officials’ review of relevant laws and regulations and AEMC’s review of the relevant Rules, ENGIE also agrees</p>	<p>DWGM Procedures until the rule change is further progressed.</p> <p>AEMO also notes ENGIE’s view that hydrogen or other renewable gases should be permitted for use to offset UAFG. Thus far AEMO has not identified anything in the Procedures that would prohibit renewable gasses that are classified as an NGE from supplying UAFG.</p> <p>An exception may be the Wholesale Market Distribution UAFG Procedures (Victoria), which currently only consider injections from the DTS CTM. AEMO will consider this further at the DWGM rule change progresses and is not specifically related to NGEs.</p>
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		<p>with AEMO’s assumption that the changes in the NGL will flow through to the NGR and that the existing provisions in the NGR will in large part apply to both natural gas and NGEs unless bespoke requirements are required (e.g., to accommodate different facilities or differences in physical characteristics).</p> <p>ENGIE has additional views on the appropriate regulatory framework for other gases and constituent gases, but because the scope of this Consultation paper is appropriately targeted at issues relating to NG equivalents, we find no disagreement with AEMO’s proposed approach.</p> <p>AEMO has done a reasonable job identifying areas in STTM and retail procedures that will need updating for NG equivalents, and ENGIE agrees with AEMO’s decision to postpone consideration of detailed changes to DWGM procedures until the DWGM Distribution-connected Facilities rule change has been progressed.</p> <p>On UAFG, ENGIE agrees with the view that use of hydrogen or other renewable gases should be permitted for use. Noting this may require further rule changes.</p> <p>As ENGIE has no further detailed comments to make at this time, we have not completed the response template.</p>	
6	Jemena Gas Networks	<p>Jemena Gas Networks (NSW) Ltd (JGN) welcomes the opportunity to provide a submission on the AEMO consultation paper on Extending the national gas regulatory framework to hydrogen blends &amp; renewable gases. JGN distributes gas to over 1.4 million residential, business and industrial sites in Sydney, Newcastle, the Central Coast, Wollongong and more than 20 regional centres.</p> <p>JGN largely supports the approach proposed by AEMO towards the required changes to the procedures in NSW and the ACT. Within NSW and the ACT, the existing gas network can work from an operational and technical viewpoint for Natural Gas Equivalents.</p> <p>We agree that the Procedures as currently written work for a Natural Gas Equivalent (NGE) but think they could be improved to assist the emerging NGE market. Some of the improvements JGN considers necessary are:</p> <ul style="list-style-type: none"> <li>• Subject to a materiality threshold, small NGE facilities can be exempt from participating in the STTM with the materiality threshold to be determined by AEMO on a regular basis having regard to the market.</li> </ul>	<p>AEMO notes Jemena’s support for the review and that Jemena largely supports the approach proposed by AEMO for the NSW and ACT Retail Market Procedures.</p> <p>AEMO notes that Jemena considers that a materiality threshold and an aggregation framework in the STTM would be necessary to</p>

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		<ul style="list-style-type: none"> <li>• NGE facility operators should be able to aggregate facilities and participate in the STTM as though it was a single facility.</li> </ul> <p>The definition of gas in both the STTM Procedures and the Retail Market Procedures for NSW-ACT will need to be amended in line with Energy Law And Rules.</p> <p>We note in the consultation paper AEMO acknowledges that <i>“they may need to make further amendments to definitions and terms if there are changes to defined terms (or new defined terms) in the NGR following the AEMC’s review”</i>. JGN agrees with this statement.</p> <p>JGN is pleased to see progress in the moving the regulatory framework towards a renewable gas future. We believe more work needs to be done to make it easier for small producers to participate in existing markets to enable a new market to evolve. We are keen to continue engaging in this.</p>	<p>facilitate NGEs in the market. AEMO believes these concepts could use further investigation. However, we note that to be implemented, they would require changes to the Rules and so consideration of an aggregation or exemption framework is better placed in the AEMC’s review of the NGR. AEMO and the AEMC are working collaboratively on each of our respective reviews.</p> <p>Please see response to Ref #40 for further information on materiality thresholds and exemptions in the STTM.</p>
7	Public Interest Advocacy Centre	<p>The Public Interest Advocacy Centre (PIAC) is a leading social justice law and policy centre. Established in 1982, we are an independent, non-profit organisation that works with people and communities who are marginalised and facing disadvantage. PIAC builds a fairer, stronger society by helping to change laws, policies and practices that cause injustice and inequality. The Energy and Water Consumers’ Advocacy Program (EWCAP) develops policy and represents the interests</p>	<p>AEMO notes PIAC’s submission and that PIAC does not support the use of NGEs in gas networks. PIAC considers that if NGE’s are introduced then</p>

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	<p>of low-income and other residential consumers of electricity, gas and water in NSW.</p> <p>PIAC welcomes the opportunity to respond to the Australian Energy Market Operator’s (AEMO) Hydrogen blends and renewable gases procedures review.</p> <p>We note Energy Ministers have directed AEMO to review the National Gas Procedures (the Procedures) to identify potential changes that may be required to the Short-Term Trading Markets (STTM), Declared Wholesale Gas Market (DWGM) and Retail Markets Procedures (RMP) in Victoria, NSW and ACT, Queensland and South Australia to facilitate hydrogen blends and renewable gases.</p> <p>PIAC does not support the use of Natural Gas Equivalents (NGE) in gas networks. If NGE are introduced to gas networks AEMO’s procedures should be expanded to protect the interests of consumers.</p> <p>The review and expansion of the Procedures to accommodate any use of NGEs must focus on suitability of consumption on equivalent terms with Natural Gas (NG). Equivalence must be assessed holistically and ensure there is no impact on the:</p> <ul style="list-style-type: none"> <li>• safety of the network,</li> <li>• life of network assets,</li> <li>• cost of providing gas through networks,</li> <li>• safety of consumers,</li> <li>• utility, efficiency, or life of consumer appliances, and</li> <li>• the accuracy of metering and billing of consumer usage.</li> </ul> <p>Where the introduction of NGEs does result in impacts on any of these aspects the Procedures should focus on ensuring transparency, consistency and robust oversight of standards and specifications. Safety, quality, efficiency and affordability of supply to consumers must be protected and promoted.</p> <p>PIAC will provide a detailed submission to the Australian Energy Market Commission in response to its review of the Regulatory Frameworks and will supply this to AEMO as a supplementary submission by 9 December 2021.</p>	<p>AEMO’s Procedures should be expanded to protect the interests of consumers.</p> <p>AEMO notes that any expansion to the scope of the Procedures would require an NGR change and is out of scope for this review. AEMO also notes that AEMC are considering consumer protections as part of their review and that PIAC has provided the AEMC with a submission on these matters.</p>
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Responses to questions in paper

Qn #	Section # in paper	Question	Ref #	Participant	Comment	AEMO Response
1	2.1 – Scope of AEMO’s review	Are there any other relevant matters that should be considered in AEMO’s review of the Procedures that fall within the scope of the terms of reference?	8	AGIG	AEMO has identified the relevant matters that should be considered within this review that fall within the scope of the terms of reference.	AEMO notes that AGIG believes AEMO to have identified the relevant matters for its review of the procedures.
			9	APA	The inclusion of injection from the transmission system should be considered along with injections in distribution to assess the full impact on the functioning of facilitated markets. In addition, consideration may need to be given to scheduling and curtailment mechanisms and how these specifically relate to scheduling of injections to create blended products and maintain blends within the tolerance range. For instance, it may now be that in facilitated markets, the market is not only solving for quantity of supply and price, but also ensuring that a suitable blending tolerance range is scheduled and maintained.	<p>Action 3.15 of the National Hydrogen Strategy states that Ministers “<i>Agree to not support the blending of hydrogen in existing gas transmission networks until such time as further evidence emerges that hydrogen embrittlement issues can be safely addressed. Options for setting and allowing for ongoing updates of safe limits for hydrogen blending in transmission networks will form part of the review in 2020.</i>”</p> <p>As such, at this stage transmission -level injections are not expressly included in scope for AEMO’s review of the Procedures. Nevertheless, AEMO will endeavour to ensure that where practical proposed Procedure changes contemplate future injections from transmission.</p>

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			10	AusNet Services	We consider the scope of AEMO’s review of the Procedures is adequate at this point of the reform, noting changes to the National Gas Rules (NGR) and National Gas Law (NGL) may require subsequent procedure changes.	AEMO notes that AusNet Services believes AEMO to have identified the relevant matters for its review of the procedures.
			11	Bioenergy Australia	We cannot identify any other relevant matters that should be considered within the scope.	AEMO notes that Bioenergy Australia believes AEMO to have identified the relevant matters for its review of the procedures.
			12	Energy Networks Australia	No. The scope of review is appropriate at this point.	AEMO notes that ENA believes AEMO to have identified the relevant matters for its review of the procedures.
			13	Jemena Gas Networks	Not applicable	AEMO notes that JGN did not provide a response to this question.
			14	Red and Lumo Energy	Red Energy and Lumo Energy (Red and Lumo) have no further suggestions at this time within the scope as it is described.	AEMO notes that Red and Lumo have no further suggestions.
DWGM Procedures						
2	3.8 – DWGM Distribution UAFG Procedures	Do you think the approach to determining and allocating distribution UAFG should	15	AGIG	We note that the AEMC’s consultation is currently considering whether there should be changes to the UAFG arrangements in the DWGM to allow gas	AEMO notes the feedback from AGIG that they would support a change to UAFG framework in Victoria.

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		<p>be changed in the Procedures? If so, what changes to the processes do you think should be made?</p>			<p>distributors to offset their UAFG with renewable gas.</p> <p>We strongly support jurisdictional arrangements for UAFG to allow gas distributors to offset UAFG with hydrogen and other renewable gas. Allowing gas distributors to offset UAFG with gas blends is a relatively simple mechanism to allow gas distributors to act to reduce their scope 1 emissions (which broadly correlate with UAFG) by injecting renewable gases to displace natural gas. For the UAFG arrangements in the DWGM, it reforms could allow the distributors to be responsible for supplying UAFG (rather than the retailers) either through its own operations or contract through a third party, thus encouraging further activity to reduce emissions. The UAFG benchmark framework set by the Essential Services Commission Victoria could also be replaced by a settlement/sourcing process similar to the SA and QLD models involving a UAFG supplier.</p> <p>We recognise this would require a wholesale change to the existing UAFG mechanism for the</p>	<p>We note that a change to the UAFG approach would require broader changes to the economic and regulatory framework. As such a comprehensive change to the approach, as suggested by AGIG, is outside of the AEMO's review's scope given the review's terms of reference but could be considered by a relevant policy body.</p> <p>AEMO will review its UAFG Procedures to ensure that they are consistent with the any changes made in the DWGM DCF rule change or the AEMC's review. This is expected to be limited to incorporating NGE injections at distribution under the current framework.</p> <p>Also see AEMO response in ref #67 and #92.</p>

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					DWGM and would support further consideration by the AEMC in conjunction with AEMO and the Essential Services Commission Victoria outside of the current review.	
			16	APA	Victorian UAFG is currently provided by retailers in accordance with UAFG benchmarks set by the ESCV every 5 years for the distributor Access Arrangements. Consideration should be given to change the provisions allowing the distributor to arrange its own UAFG, either by itself or via a UAFG provider such as occurs in Queensland. This would provide flexibility should a distributor want to provide for some or all UAFG via NGE injection facilities within the distribution network.	AEMO notes that a change to the UAFG approach would require broader changes to the economic and regulatory framework. As such, a comprehensive change to the approach, as suggested by APA, is outside of the AEMO's review's scope given the review's terms of reference. Any changes would need to be considered by the relevant policy body.
			17	AusNet Services	The current procedures assume the only supply source of Natural Gas (NG) or NG equivalents is the DTS network. The DWGM rule change proposes to amend this by adding a framework for distribution connected facilities. There is a potential arrangement	AEMO agrees that if the DWGM rule change expands the market framework to include distribution connected facilities then these Procedures may need to be revised to incorporate

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					<p>of gas distributors producing renewable gas as NG equivalents and use it to offset UAFG losses (less than 3%).</p> <p>This arrangement should be explored alongside broader regulatory framework changes to facilitate market scale production of NG equivalents, that include broad and flexible ring-fencing exemptions that allow gas distributors to facilitate the transition to renewable gas networks.</p> <p>AusNet would prefer the establishment of broader regulatory framework changes that include broad ring-fencing exemptions, to an arrangement involving offsetting UAFG. However, in absence of this, we would support an assessment of the necessary changes to make it viable for gas distributors up to the point of UAFG losses.</p> <p>Using the UAFG offset to allow gas distributors to procure renewable gas would require jurisdictional changes to the UAFG arrangements themselves. The Victorian benchmarking arrangements would need</p>	<p>distribution supply into the UAFG equations.</p> <p>AEMO notes that AusNet would like to see consideration of broader changes to the framework including flexible ring-fencing exemptions. AEMO notes that the Officials and AEMC reviews are considering ring-fencing arrangements and that these arrangements are not covered by AEMO's Procedures.</p> <p>AEMO notes that AusNet would also support an assessment of the changes required for gas distributors to be able to supply gas up to the point of UAFG losses. As AusNet identifies, such a change would require broader regulatory changes including changes to jurisdictional instruments and is not in scope for AEMO's review of the Procedures as policy changes would need to be made first.</p>

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					to recognise the renewable gas injection offsetting losses. The long settlement timeframes of about 2 years and settlement by differences mean gas distributors would not be confident that they will be adequately compensated for their supplied gas and certainly not in a timely manner.	
			18	Bioenergy Australia	Bioenergy Australia are in support of jurisdictional arrangements for UAFG to allow gas distributors to offset UAFG with NG equivalents.	AEMO notes Bioenergy Australia's feedback.
			19	Energy Networks Australia	<p>The current procedure assumes that UAFG amounts are met at custody transfer meter injections on the network.</p> <p>Until a commercial renewable gas market is established, DNSP are the most likely facilities to produce the renewable gas to produce the natural gas equivalent gas.</p> <p>Where appropriate, it would be beneficial if amendments to the pipeline service definition also ensured that DNSPs could capture production of renewable gases for the purpose of supporting a DNSP to deliver ancillary services. For example, this</p>	AEMO notes that the definition of pipeline service is in the NGL and so would require a law change. As such, this feedback may be better provided to the Officials' review.

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					would allow DNSPs to meet their unaccounted for gas obligations with renewable gas.  AEMO could identify what changes to the Procedures would be required.	
			20	Jemena Gas Networks	Not applicable	AEMO notes that JGN did not provide a response to this question.
			21	Red / Lumo	On the assumptions that; <ul style="list-style-type: none"> <li>the term natural gas incorporates NGE,</li> <li>NGE facilities are participating and being scheduled through the DWGM,</li> <li>NGE injections are settled in the same manner as they are currently for natural gas,</li> </ul> Red and Lumo do not see any need to change the approach to UAFG in the Procedures.	AEMO notes Red and Lumo's feedback that they do not believe the UAFG Procedures need modifying if NGE and NGE facilities and injections are incorporated.
3	3.9 – DWGM General	Considering this section, the scope of the DDCF rule change and, Attachment A, are there any other matters you think AEMO should consider to	22	AGIG	No comment.	AEMO notes that AGIG did not provide a response to this question.
			23	APA	Many elements of this developing industry are yet to be determined such as: <ul style="list-style-type: none"> <li>the most cost effective injection locations</li> </ul>	AEMO notes APA's feedback which mostly relates to the broader national gas framework and how it applies to transmission

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		<p>facilitate NGEs in the DWGM? If so, please identify the relevant Procedure and explain why a change is required to accommodate NGEs.</p>			<p>whether in distribution systems or further upstream in transmission</p> <ul style="list-style-type: none"> <li>• whether sections of the transmission system (particularly for DTS) could be compartmentalized for NGE injections due to the predominate flow dynamics in these sections</li> <li>• the most efficient metering arrangements.</li> </ul> <p>All of these aspects need to be worked through and the national gas framework, rules and procedures need to be flexible enough to keep these options open rather than inadvertently direct development a particular way.</p>	<p>assets. As noted in our response to Ref# 9, transmission assets are out of scope of this review.</p> <p>However, AEMO does agree with APA's feedback that the Procedures need to be flexible to accommodate potential future NGE supply from transmission. At this stage AEMO has not identified any proposed changes to its Procedures that would prevent development at the transmission level. AEMO welcomes further feedback on this matter once draft Procedures have been published.</p> <p>AEMO also notes that this review is an initial examination of the regulatory arrangements to identify and address any gaps in the short-term. AEMO expects that further revision of the Procedures following this review is likely given the rapidly evolving nature of this industry and this could potentially include accommodating</p>

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						changes related to transmission level assets.
			24	AusNet Services	Our non-DTS distribution networks may be prime locations in Western Victoria for renewable gas blending at or near the city gate sites. The gas custody and title in these networks belong to the non-DTS pipeline owner and their contracted retailer. Therefore, this may be an opportune time to move our non-DTS distribution areas to global settlements to enable greater retail competition and the ability for injected NG equivalents to compete in these distribution networks.	In relation to “non-declared” distribution systems, Distributors already provide metering data for all distribution supply points within these areas, therefore global data exists today.
			25	Bioenergy Australia	No comment.	AEMO notes that Bioenergy Australia did not provide a response to this question.
			26	Energy Networks Australia	No further areas to be addressed.	AEMO notes that ENA did not believe there were further areas to be addressed.
			27	Jemena Gas Networks	Not applicable	AEMO notes that JGN did not provide a response to this question.
			28	Red / Lumo	Please refer to Red and Lumo’s submission to the AEMC.	AEMO notes Red and Lumo’s submission to the AEMC.

STTM Procedures

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4	4.3 – STTM hub definition change framework	Do you think a more streamlined consultation process should be considered for amendments to STTM hub definitions? If yes, what steps do you think should be involved in such a consultation process?	29	AGIG	We would support a more streamlined consultation process for amendments to STTM hub definitions. For example AEMO's suggestion to have CTPs that comprise a hub sit in a subordinate instrument to the STTM Procedures and this instrument would be updated rather than the entire STTM Procedures.	AEMO notes AGIG's preference for a streamlined process. AEMO agrees that the benefits of a full public consultation are likely outweighed by the costs and time associated with the process for making changes to the STTM Procedures. This feedback should also be provided to the AEMC in its review as rule changes are potentially required. AEMO will consult with the AEMC as to the best way forward given a change would be required in the NGR.
			30	APA	No comment.	AEMO notes that APA did not provide a response to this question.
			31	AusNet Services	AusNet's gas networks are located in Victoria and we do present views in relation to the STTM hub.	AEMO notes that changes to the STTM are not relevant to AusNet Services' submission and therefore that AusNet has not provided a response to this question.
			32	Bioenergy Australia	Bioenergy Australia support a more streamlined consultation process for amendments to STTM hub definitions. We can offer access to our membership to workshop	See ref #29

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					the consultation process if this is helpful.	
			33	Energy Networks Australia	<p>In the early stages, NGE connections will be directly into the distribution network.</p> <p>Connecting to the STTM will require detailed planning to monitor the gas composition across the market and to ensure all customers can support the NGE, which could be set at different levels by different jurisdictions. A streamlined process should be supported to enabling blending into the transmission system, if that is the right policy direction.</p>	See ref #29
			34	Jemena Gas Networks	The current hub definition and change framework is not fit for purpose for NGE facilities. A more streamlined process whereby STTM hub definitions sit in a separate document which only requires agreement from the relevant network operator and a 30 business day notice period to be updated would be more appropriate.	See ref #29
5	4.3 – STTM market operations	Do you agree with AEMO's assessment that the STTM market	35	AGIG	We agree with AEMO's assessment that the STTM market operations do not need to change to facilitate NGEs.	AEMO notes AGIG's support for AEMO's assessment.

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		operations do not need to change to facilitate NGEs? If not, what changes do you believe may be required?	36	APA	If NGEs are measured and transacted on an energy unit basis such as joules, APA doesn't envisage significant changes would be required to STTM operations to accommodate NGEs.	AEMO notes APA's support for AEMO's assessment.
			37	AusNet Services	AusNet's gas networks are located in Victoria and we do not present views in relation to the STTM hub.	AEMO notes that changes to the STTM are not relevant to AusNet Services' submission and therefore that AusNet has not provided a response to this question.
			38	Bioenergy Australia	We agree with AEMO's assessment that the STTM market operations do not need to change to facilitate NGEs.	AEMO notes Bioenergy Australia's support for AEMO's assessment.
			39	Energy Networks Australia	ENA supports this assessment for the use of NGE's.	AEMO notes ENA's support for AEMO's assessment.
			40	Jemena Gas Networks	While the current STTM market operations do not have to change to facilitate NGEs, there are some changes which could help facilitate NGEs. These changes are: <ul style="list-style-type: none"> <li>• Simplified amendments to STTM hub definitions</li> <li>• a materiality threshold for NGE facilities below which need</li> </ul>	AEMO notes that the issue of materiality thresholds and aggregation of facilities are linked. A materiality threshold raises issues such as: <ol style="list-style-type: none"> <li>1. How would the market function as this sector becomes and increasingly large part of the production mix?</li> </ol>

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					<p>registration is optional, with the materiality threshold to be determined by AEMO having regard to the market. JGN sees this threshold as changing over time as the NGE market matures.</p> <ul style="list-style-type: none"> <li>the ability to aggregate NGE facilities under common operation or where requested.</li> </ul> <p>The rules from exemption should look to align with the rules in place for the electricity market where appropriate.</p>	<p>2. How would this impact participant's share of market fees in the long run?</p> <p>3. Does this provide an undue commercial advantage to small production facilities?</p> <p>It would need to be established how an exemption from registration would outweigh the market benefits of including these facilities (even in an aggregated form).</p>
6	4.3 – STTM administered market states	Do you consider that threshold for significant constraints for a trading participant to trigger the significant constraints process is appropriate? If not, what would an appropriate threshold be?	41	AGIG	The threshold of 5TJ for hydrogen and renewable gas production facilities is likely too large to capture the operational constraints of hydrogen and renewable gas facilities. An appropriate size threshold for these facilities could be reduced to around 5 GJ for example.	<p>AEMO notes AGIG's feedback. The purpose of this market setting is to assist participants in managing their market risk when a material operational constraint affects a hub without unduly impacting market outcomes.</p> <p>AEMO will consider this parameter further but we note that if the threshold is reduced that this could potentially lead to an administered market state being triggered</p>

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						more frequently for events that are arguably non-material.
			42	APA	To ensure a consistent playing field, we support the same rules being applied to distribution connected facilities as transmission connected facilities.	AEMO notes APA's feedback.
			43	AusNet Services	AusNet's gas networks are located in Victoria and we do not present views in relation to the STTM hub.	AEMO notes that changes to the STTM are not relevant to AusNet Services' submission and therefore that AusNet has not provided a response to this question.
			44	Bioenergy Australia	The threshold of 5TJ for hydrogen and renewable gas production facilities is likely too large to capture the operational constraints of hydrogen and renewable gas facilities. An appropriate size threshold for these facilities could be reduced to around 5 GJ.	See ref #41.
			45	Energy Networks Australia	No comment provided.	AEMO notes that ENA did not provide a response to this question.
			46	Jemena Gas Networks	The current threshold 5TJ/50% is appropriate.	AEMO notes JGN's support for the current threshold.
7	4.3 – Other areas of the	Considering this section and	47	AGIG	No comment.	AEMO notes that AGIG did not provide a

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Qn #	Section # in paper	Question	Ref #	Participant	Comment	AEMO Response
	STTM Procedures	Attachment B, are there any other areas of the Procedures that you consider need to be changed to facilitate participation of NGEs in the STTM? If so, please identify the procedure and explain why changes are required to accommodate NGEs.				response to this question.
			48	APA	Consideration may need to be given to scheduling and curtailment mechanisms and how these specifically relate to scheduling of injections to create blended products and maintain blends within the tolerance range. For instance, it may now be that in facilitated markets, the market is not only solving for quantity of supply and price, but also ensuring that a suitable blending tolerance range is scheduled and maintained.	<p>A change to the STTM's market design to optimise blending constraints in the STTM schedule would represent a fundamental change to the market design.</p> <p>AEMO does not consider a change of this nature is required to facilitate initial limited NGE supply into the market and that this would be a matter better considered at a later time. As the industry develops, and if blended products become a more significant share of supply, it may be appropriate to review the fundamental market design.</p>
			49	AusNet Services	AusNet's gas networks are located in Victoria and we do not present views in relation to the STTM hub.	AEMO notes that changes to the STTM are not relevant to AusNet Services' submission and therefore that AusNet has not provided a response to this question.
			50	Bioenergy Australia	No comment.	AEMO notes that Bioenergy Australia did

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						not provide a response to this question.
			51	Energy Networks Australia	No further areas identified.	AEMO notes that ENA did not believe there were further areas of the Procedures that needed changes in order to facilitate participation of NGEs in the STTM.
			52	Jemena Gas Networks	Not applicable	AEMO notes that JGN did not provide a response to this question.
Retail Market Procedures						
8	5.3 – Definitions and concepts in the retail market procedures	Do you agree with proposed potential changes to the terms in table 3? If not, please provide details on which RMP jurisdiction and details about the reason why you don't agree with the proposed changes?	53	AGIG	We agree that many of the required changes to the Procedures are largely definitional, eg. where injections currently relate only to those from transmission pipelines. These changes will cascade down to specific clauses.	AEMO notes AGIG's support for AEMO's assessment.
			54	APA	APA agrees that many of the required changes to the RMP are largely definitional – such as injections only coming from transmission pipelines – and the changes will need to cascade down to the specific clauses.	AEMO notes APA's support for AEMO's assessment.
			55	AusNet Services	AusNet agrees with AEMO's assessment of definitions and concepts in	AEMO notes AusNet Services' support for AEMO's assessment of the Victorian Retail

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Qn #	Section # in paper	Question	Ref #	Participant	Comment	AEMO Response
					the Victorian Retail Market Procedures.	Market Procedures (RMPs).
			56	Bioenergy Australia	We have no concerns about the proposed potential changes.	AEMO notes Bioenergy Australia feedback that they have no concerns regarding the proposed potential changes that AEMO has put forward.
			57	Energy Networks Australia	No comment provided.	AEMO notes that ENA did not provide a response to this question.
			58	Jemena Gas Networks	NSW-ACT. Yes agree.	AEMO notes JGN's support for AEMO's assessment in light of the NSW/ACT RMP.
			59	Red / Lumo	Red and Lumo agree that the identified terms need to be reviewed and amended to incorporate distribution-connected, NGE (Natural Gas Equivalents) facilities.	AEMO notes Red and Lumo support for AEMO's assessment.
9	5.3 – Definitions and concepts in the retail market procedures	Do you think there could be any unintended consequences from amending these terms? If so, please provide details on which RMP jurisdiction, clause reference # and details about the reason why you believe	60	AGIG	SA gate point coding (SAWA Gas Retail Market Systems-Interface Control Document – Appendix D 14.2) – the final character E indicates the transmission pipeline the gate is connected to a generic code for downstream supplies.	AEMO notes AGIGs feedback about an unintended consequence to do with the gate point coding in South Australian. AEMO's initial understanding of the issue that AGIG has identified is that under the current RMP AGIG only provides AEMO with the aggregate gate point metering data (e.g. total for the

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Qn #	Section # in paper	Question	Ref #	Participant	Comment	AEMO Response
		unintended consequences could occur).				<p>pipeline). AEMO's preliminary assessment is of the NSW/ACT process is that AEMO receives aggregated value from Network Operator.</p> <p>As per AEMO's consultation paper, (Section A3) AEMOs view is there are no changes currently contemplated for chapter 3 (Metering) of the SA RMPs.</p> <p>Participants are encouraged to provide further feedback on this matter to AEMO's draft report that will be published in March 2022.</p>
			61	APA	The changes would need to include the SA gate point coding. The SAWA Gas Retail Market Systems Interface Control Document will need to be amended to incorporate downstream supplies.	See AEMO response in ref #60
				62	AusNet Services	At this stage, we have not identified unintended consequences, but we will reassess when the proposed procedure drafting is provided.

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			63	Bioenergy Australia	We have no concerns about the proposed potential changes.	AEMO notes that Bioenergy Australia has not identified any unidentified consequences from amending these terms.
			64	Energy Networks Australia	No comment provided.	AEMO notes that ENA has not provided a comment.
			65	Jemena Gas Networks	NSW-ACT. No unintended consequences from proposed changes.	AEMO notes that JGN has not identified any unidentified consequences from amending these terms in light of the NSW/ACT RMP.
			66	Red / Lumo	Red and Lumo have not identified any concerns with the proposed amendments at this time.	AEMO notes that Red and Lumo has not identified any unidentified consequences from amending these terms
10	5.3 – Definitions and concepts in the retail market procedures	Noting the review scope described in sections 2.1 and 5.2, are there any other terms in the RMP AEMO should consider amending to facilitate the participation of NGEs (Natural Gas Equivalents) or NGE facilities?	67	AGIG	<u>Queensland Retail Market Procedure</u>  Currently the definition of UAFG Provider 'Means the retailer who provides UAFG in a distribution area for a UAFG year.' Retailer is defined as 'An entity that participates in the retail gas market of Queensland in a registrable capacity of a retailer under the Rules, and has registered with AEMO under the Rules in that registrable capacity.' In other states (e.g. NSW and SA) a UAFG provider	AEMO notes AGIGs proposal that the Queensland RMPs should be amended so that UAFG provider is not limit to just a retailer.  AGIG proposal is outside of the current review given the review's scope and the broader economic and regulatory framework that relates to UAFG provision and would likely require a broader

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Qn #	Section # in paper	Question	Ref #	Participant	Comment	AEMO Response
					is not limited to a retailer, allowing distributors to engage with other parties where this is appropriate. We believe the Queensland procedure should be amended to align with the approach in other states, providing greater flexibility and more options particular as renewable gas as UAFG may be procured directly from a producer.	policy review initiated by a relevant body.  Also see AEMO response ref #15 and #92
			68	APA	The Queensland RMPs currently define a UAFG provider as '... the retailer who provides UAFG in a distribution area for a UAFG year'. The RMPs will need to be amended to accommodate the likelihood distributors may have a preference to use NGE injections to provide for UAFG.	See AEMO response in ref #67.
			69	AusNet Services	None that are identified	AEMO notes that AusNet Services has not identified any additional terms that need amending to facilitate the participation of NGEs or NGE facilities.
			70	Bioenergy Australia	No comment	AEMO notes that Bioenergy Australia has not identified any additional terms that need amending to facilitate the

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Qn #	Section # in paper	Question	Ref #	Participant	Comment	AEMO Response
						participation of NGEs or NGE facilities.
			71	Energy Networks Australia	No comment provided.	AEMO notes that ENA has not provided a response to this question.
			72	Jemena Gas Networks	NSW-ACT  No change is needed to the term "Network receipt point" as it can cover all gas entering a network, noting that it may not be always a user who is injecting or arranging to inject the gas into the network section. The definition of heating value could be amended to incorporate "vary in accordance with the mixture of gas in the network section" which would cover NGEs.	AEMO notes JGN assessment that the term Network receipt point doesn't need changing.  As stated in AEMO's paper <sup>1</sup> AEMO is reviewing the term "Network receipt point" to determine whether it needs to be changed. AEMO will provide further information about this mater in AEMO's draft recommendations for Procedure changes which is targeted to be issued in late March 2022. Also see AEMO response in ref #81  AEMO notes JGN suggestion that the definition of heating value could be amended. AEMO will consider JGN's proposed amendments.
11	5.3 – Balancing, allocation,	Do you agree with AEMO's view that the	73	AGIG	We agree with AEMO's view that the existing obligations and processes	AEMO notes that AGIG agrees with AEMO's assessment that the

<sup>1</sup> Extending the national gas regulatory framework to hydrogen blends & renewable gases – review of the AEMO Procedures. Click [here](#) to view.

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Qn #	Section # in paper	Question	Ref #	Participant	Comment	AEMO Response
	and reconciliation	existing obligations and processes in the procedures for determining balancing, allocations and reconciliation will be fit for purpose for NGEs and NGE facilities? If not, please provide details on which RMP jurisdiction, clause reference # and what changes do you consider may be required?			in the procedures for determining balancing, allocations and reconciliation will be fit for purpose for NGEs and NGE facilities.	existing obligations and processes in the procedures for determining balancing, allocations and reconciliation <u>will be fit</u> for purpose for NGEs and NGE facilities.
			74	APA	No comment.	AEMO notes that APA has not provided a response to this question.
			75	AusNet Services	AusNet's gas networks are located in Victoria and we do not on procedures outside of Victoria. Our views regarding relevant NGR provisions that apply in Victoria have been provided to the AEMC.	AEMO notes that AusNet Services only operates in Victoria and their views regarding relevant NGR provisions that apply in Victoria have been provided to the AEMC.
			76	Bioenergy Australia	Yes, BA agrees with AEMO's view that the existing obligations and processes in the procedures for determining balancing, allocations and reconciliation will be fit for purpose for NGEs and NGE facilities.	AEMO notes that Bioenergy Australia agrees with AEMO's assessment that the existing obligations and processes in the procedures for determining balancing, allocations and reconciliation <u>will be fit</u> for purpose for NGEs and NGE facilities.
			77	Energy Networks Australia	ENA support this.	AEMO notes that ENA agrees with AEMO's assessment that the existing obligations and processes in the procedures for determining balancing, allocations and

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						reconciliation <u>will be fit</u> for purpose for NGEs and NGE facilities.
			78	Jemena Gas Networks	NSW-ACT. Yes, agree with AEMO's view.	AEMO notes that JGN agrees with AEMO's assessment that the existing obligations and processes in the procedures for determining balancing, allocations and reconciliation <u>will be fit</u> for purpose for NGEs and NGE facilities.
12	5.3 – Balancing, allocation, and reconciliation	Will users and distributors be able to meet their obligations under the procedures to provide AEMO with information on injections (and withdrawals), if NGE facilities connect to distribution networks? If not please provide details on which RMP jurisdiction, clause reference # and, what issues do you think AEMO needs to consider?	79	AGIG	Distributors should be able to meet their obligations under the procedures to provide AEMO with information on injections (and withdrawals), if NGE facilities connect to distribution networks.	AEMO notes that AGIG agrees with AEMO's assessment that the existing obligations and processes in the procedures for determining balancing, allocations and reconciliation will be fit for purpose for NGEs and NGE facilities.
			80	APA	No comment	AEMO notes that APA has not provided a response to this question.
			81	AusNet Services	AusNet's gas networks are located in Victoria and we do not on procedures outside of Victoria. Our views regarding relevant NGR provisions that apply in Victoria have been provided to the AEMC.	See AEMO response ref #75
			82	Bioenergy Australia	Yes, we believe distributors should be able to meet their obligations under the	AEMO notes that Bioenergy Australia agrees with AEMO's

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Qn #	Section # in paper	Question	Ref #	Participant	Comment	AEMO Response
					procedures to provide AEMO with information on injections (and withdrawals), if NGE facilities connect to distribution networks.	assessment that the existing obligations and processes in the procedures for determining balancing, allocations and reconciliation will be fit for purpose for NGEs and NGE facilities.
			83	Energy Networks Australia	ENA supports this.	AEMO notes that ENA agrees with AEMO's assessment that the existing obligations and processes in the procedures for determining balancing, allocations and reconciliation will be fit for purpose for NGEs and NGE facilities.
			84	Jemena Gas Networks	NSW-ACT.  Yes. An NGE facility can be considered as an STTM Custody Transfer Point or a Network Receipt Point (where outside of STTM).	AEMO notes that JGN with agrees with AEMO's assessment that the existing obligations and processes in the procedures for determining balancing, allocations and reconciliation will be fit for purpose for NGEs and NGE facilities. AEMO also notes feedback that NGE facility can be considered as an STTM Custody Transfer Point or a Network Receipt Point (where outside of STTM).

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Qn #	Section # in paper	Question	Ref #	Participant	Comment	AEMO Response
						Also see AEMO response in ref #72
13	5.3 – Metering	Do you agree with AEMO’s assessment that the RMP with respect to metering are able to accommodate NGEs? If not, please provide details on which RMP jurisdiction, clause reference # and what changes do you think may be required?	85	AGIG	It is not clear who is currently responsible for NGE meter facility metering and the provision of data to STTM and Retail Market systems. Currently Custody Transfer Meters are owned and operated by the Transmission Pipeline Operator in SA and VIC, but by the Distributor in QLD.	AEMO notes AGIG comment about the lack of clarity as to who is currently responsible for NGE meter facility metering and the provision of data. AEMO will investigate this matter further.
			86	APA	The responsibility for NGE facility metering and the provision of data to STTM and Retail Market systems needs to be clear. Currently, Customer Transfer Meters and owned and operated by the Transmission Pipeline Operator in South Australia and Victoria, but by the Distributor in Queensland.	See AEMO response 85
			87	AusNet Services	AusNet generally agrees with AEMO’s assessment of the impact of renewable gas changes to metering procedures. From our perspective, distributor-connected supplies will be metered at the gas blending facilities with metering of the NG equivalents.	AEMO notes that AusNet Services feedback that they generally agrees with AEMO’s assessment and AusNet Services comment that distributor-connected supplies will be metered at the gas blending facilities with

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Qn #	Section # in paper	Question	Ref #	Participant	Comment	AEMO Response
						metering of the NG equivalents.
			88	Bioenergy Australia	No comment	AEMO notes that Bioenergy Australia has not provided a response to this question.
			89	Energy Networks Australia	Yes	AEMO's notes that ENA agrees with AEMO assessment that the RMP with respect to metering are able to accommodate NGEs
			90	Jemena Gas Networks	NSW-ACT. Agree with AEMO's assessment that existing metering assets are able to accommodate NGEs and low-level hydrogen blends.	AEMO's notes that JGN agrees with AEMO's assessment that the RMP with respect to metering are able to accommodate NGEs
			91	Red / Lumo	Red and Lumo agree that jurisdictional changes are required to support the metering of NGE and these changes may have impacts upon the Procedures which will need review once jurisdictional changes are proposed.	AEMO notes that Red and Lumo agrees with AEMO's assessment that the RMP with respect to metering are able to accommodate NGEs
14	5.3 – Distribution UAFG	Do you agree with AEMO's view that the distribution UAFG process in the retail market procedures in NSW and ACT, Queensland	92	AGIG	We agree with AEMO's view that the distribution UAFG process in the retail market procedures in NSW and ACT, Queensland and South Australia do not require change to facilitate NGEs. However we note that the QLD RMP definition of 'UAFG	AEMO notes AGIG support for AEMO's assessment that the distribution UAFG process in the retail market procedures in NSW and ACT, Queensland and South Australia do not

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Qn #	Section # in paper	Question	Ref #	Participant	Comment	AEMO Response
		and South Australia do not require change to facilitate NGEs? If not, what changes do you believe may be required?			Provider' should be amended as discussed in Q.10 above.	require change to facilitate NGEs.  AEMO also notes AGIG comment about amending the QLD RMP definition of 'UAFG Provider. AGIG proposal is outside of the current review given the review's scope and the broader economic and regulatory framework that relates to UAFG provision and would likely require a broader policy review initiated by a relevant body.  Also see AEMO response 67.
			93	APA	The Queensland definition of UAFG Provider needs to be amended to facilitate the capacity for distributors to be providers of UAFG.	See AEMO response 67.
			94	AusNet Services	AusNet's gas networks are located in Victoria and we do not on procedures outside of Victoria. Our views in relevant NGR provisions that apply in Victoria have been provided to the AEMC.	AEMO notes that AusNet Services only operates in Victoria and their views regarding relevant NGR provisions that apply in Victoria have been provided to the AEMC.
			95	Bioenergy Australia	Yes, BA agrees with AEMO's view that the distribution UAFG process in the retail market procedures in NSW and	AEMO notes Bioenergy Australia support for AEMO's assessment that the distribution UAFG

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Qn #	Section # in paper	Question	Ref #	Participant	Comment	AEMO Response
					ACT, Queensland and South Australia do not require change to facilitate NGEs.	process in the retail market procedures in NSW and ACT, Queensland and South Australia do not require change to facilitate NGEs.
			96	Energy Networks Australia	<p>ENA supports that no changes to the retail market procedures for UAFG are justified for NGE.</p> <p>The current procedure assumes that UAFG amounts are met at custody transfer meter injections on the network.</p> <p>Until a commercial renewable gas market is established, DNSP are the most likely facilities to produce the renewable gas to produce the natural gas equivalent gas.</p> <p>Where appropriate, it would be beneficial if amendments to the pipeline service definition also ensured that DNSPs could capture production of renewable gases for the purpose of supporting a DNSP to deliver ancillary services. For example, this would allow DNSPs to meet their unaccounted for gas obligations with renewable gas.</p>	<p>AEMO notes ENAs support for AEMO's assessment that that no changes to the retail market procedures for UAFG are justified for NGE.</p> <p>In relation to amendments to the pipeline service definition to also ensure that Distribution Network Service Providers (DNSPs) could capture production of renewable gases for the purpose of supporting a DNSP to deliver ancillary services,</p> <p>AEMO view is, as noted in responses ref #15, #67 and #92, changing the current provider of UAFG is outside of the current review given the review's scope and the broader economic and regulatory framework that relates to UAFG provision and would likely require a broader</p>

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Qn #	Section # in paper	Question	Ref #	Participant	Comment	AEMO Response
					AEMO could identify what changes to the Procedures would be required.	policy review initiated by a relevant body
			97	Jemena Gas Networks	NSW-ACT. Yes, no changes required for the NSW-ACT distribution UAFG process in the RMP to facilitate NGEs.	AEMO notes JGNs support for AEMO's assessment that that no changes to the retail market procedures for UAFG are justified for NGE.
15	5.3 – General Retail Market Procedures	Considering section 5.3 and Attachment C, do you believe there are any other matters AEMO should consider in reviewing the RMPs? If you believe there are other matters AEMO should consider please provide details on which RMP jurisdiction, clause reference # and why you believe it may need to be reviewed to accommodate NGEs.	98	AGIG	No comment.	AEMO notes that AGIG has not provided a response to this question.
			99	APA	The billing of most gas customers across the distribution networks operated and managed by APA occurs on the basis of energy consumed. Pressure and temperature components of the algorithm are fixed, with volume of gas and heating value the variable components. APA considers zonal measurement of heating values to be a more appropriate billing methodology for gas customers than the current statewide heating value approach.  Accurate measurement of the heating value via flow weighted volume analysis will result in greater	AEMO notes APA comment that about zonal measurement of heating values to be a more appropriate billing methodology for gas customers than the current statewide heating value (HV) approach.  AEMO is liaising with the Victorian government and the AEMC on this matter. AEMO will provide further information in the draft report due to be issued in late March 2022.

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					<p>accuracy of energy consumed at the customer site level if it can be accurately measured at a zonal level. Move to blended heating value zones or further disaggregated mesh blending zones would impact on metering and billing systems.</p> <p>APA proposes consistency and harmonisation between heating value methodologies and metering between markets, ensuring cost efficiency of systems and process for energy infrastructure operating in multiple markets.</p>	
			100	AusNet Services	<p>Our non-DTS distribution networks may be prime locations in Western Victoria for renewable gas blending at or near the city gate sites. The gas custody and title in these networks belong to the non-DTS pipeline owner and their contracted retailer. Therefore, this may be an opportune time to move our non-DTS distribution areas to global settlements to enable greater retail competition and the ability for injected NG equivalents to compete in these distribution networks.</p>	<p>In relation to “non-declared” distribution systems, Distributors already provide metering data for all distribution supply point within these areas, therefore global data exists today.</p>

Collated stakeholder feedback on Extending the national gas regulatory framework to hydrogen blends & renewable gases – review of the AEMO Procedures

Qn #	Section # in paper	Question	Ref #	Participant	Comment	AEMO Response
			101	Bioenergy Australia	No comment.	AEMO notes that Bioenergy Australia has not provided a response to this question.
			102	Energy Networks Australia	No other issues should be considered at this stage.	AEMO notes that ENA has No other issues should be considered at this stage.
			103	Jemena Gas Networks	NSW-ACT. Yes, the scope of AEMO's review is for NGEs and low-level hydrogen blends.	AEMO notes JGN comment.
			104	Red / Lumo	Red and Lumo have no further suggestions for review of the RMP at this time.	AEMO notes Red and Lumo feedback that no further suggestions for review of the RMP at this time.