

Related to:	Proposed approach to specifying the gases and blends within scope of national gas regulatory framework	n/a
1	<p>What are your views on the refined approach to identifying the gases and blends that could fall within the scope of the national framework (see section 3.1)?</p>	<p>I worked in oil refining for over 35 years as a chemical engineer. I fully understand the power and utility of fossil fuels and how addicted our society / civilization has become to them. Yet our long term interests are that we MUST divest ourselves off fossil fuels, including natural gas ASAP.</p> <p>The National Gas Regulations should prioritise emissions reduction.</p> <p>The “refined” approach objective is “to promote economic efficiency in the long-term interests of consumers” yet it does nothing of the sort. The objective is stated as: “The extension of the national framework is intended to: Foster the development of a competitive and cost-efficient hydrogen and renewable gas industry that promotes economic efficiency in the long-term interests of consumers.”</p> <p>My submission is that in fact this whole proposal has almost nothing to do with consumers’ long term interests and everything to do with artificially subsidising the life of the gas supply network.</p> <p>We cannot claim to “look after consumers” while doing anything to promote or encourage accumulating yet more GHG in our atmosphere.</p> <p>The long term interests of customers are to address climate change as the serious crisis that it is.</p>

		<p>António Guterres (Secretary-General of the United Nations)¹:</p> <p>“... Unchecked carbon pollution is forcing the world's most vulnerable on a frog march to destruction – now. The facts are undeniable. This abdication of leadership is criminal. The world's biggest polluters are guilty of arson of our only home.</p> <p>...</p> <p>Oil and gas giants - and their underwriters – are also on notice. You cannot claim to be green while your plans and projects undermine the 2050 net-zero target and ignore the major emissions cuts that must occur this decade. People see through this smokescreen.</p> <p>...</p> <p>The G20 must lead the way, or humanity will pay an even more tragic price. I know people everywhere are anxious and angry. I am, too. Now is the time to turn rage into action. Every fraction of a degree matters. Every voice can make a difference. And every second counts. Thank you.”</p> <p>The proposed pipeline investment for hydrogen readiness is wasteful and emission intensive. It's a diversion of scarce and well trained resources away from much higher priority work such as building & operating zero emission electricity generation, storage and transmission.</p> <p>Hydrogen will do little to increase supply of gas for at least a decade.</p>
--	--	--

¹ Launch of the IPCC report 28 Feb 2022: <https://media.un.org/en/asset/k1x/k1xcijxjhp>

It certainly cannot help with any short-term mismatch between supply and demand. The pipeline network cannot carry more than 10% by volume and 3% by energy intensity of the mix. Emissions from methane will still accumulate.

To quote ACT Energy Minister Shane Rattenbury: (via <https://reneweconomy.com.au/fossil-gas-market-facing-death-spiral-says-act-energy-minister/>)

“Our analysis suggests that green gases cannot fully replace a network distributed fossil fuel gas in the ACT. They potentially can play a niche role. They can play particular roles in things like heavy transport, or perhaps in industrial applications, but we do not see a future where we will be piping hydrogen or biogas to individual consumer households.”

Switching to 100% hydrogen would likely require a complete replacement of gas appliances with hydrogen ready appliances. Every single household and any company that has a gas connection would need to change their devices.

While both hydrogen and fossil gas can be used as a source of thermal heat, the different burn characteristics of hydrogen would likely require the installation of specialised appliances. Injecting high concentrations of hydrogen into standard gas pipelines can also lead to significant degradation of the pipes.

Rattenbury said that electrification would be the most effective way to decarbonise residential energy use, echoing the calls from energy technology experts like Saul Griffith, who has called for as much energy use as possible to be shifted to electricity, so that it can be met with zero emissions supplies of wind and solar.”

		<p>I live in Victoria, not the ACT, but the laws of physics don't change between states.</p> <p>A Victorian hydrogen economy is more likely to be based on onsite production and a dedicated small number of specialist pipelines. The <u>worst</u> possible way to foster a hydrogen industry is to add hydrogen to the gas mix to households, because electrification is rapidly becoming cheaper. The focus should be on hard-to-electrify sectors like high-temperature heating and long-haul transport.</p> <p>Finally, I would like to see the definition of hydrogen blends and other gases stating the carbon intensity of a) their production method and b) their carbon emissions when burnt. Consumers want transparent information about products they buy - this must include gas blends.</p>
Related to:	Proposed extension of the NGL and National Gas Regulations	n/a
2	<p>What are your views on the refined approach to extending the NGL to covered gases (see section 3.3)? Where appropriate, please comment in relation to the subheadings below.</p>	<p>A waste of time and effort. For the small number of biogas or hydrogen pipeline gas projects that could ever proceed without massive subsidy, it'll be better to use more targeted case by case regulation rather than attempting one piece of behemoth change to cover all scenarios.</p>

<p>2.1</p>	<p>What are your views on the proposed extension of the pipeline access regime to all pipelines transporting covered gases (i.e. natural gas, biomethane, synthetic methane, hydrogen and blends of these gases) and the impacts it may have on smaller players or new entrants? In responding to this question please consider: the proposal to extend to the regime in this way from the commencement of the reforms; the potential impact on industry development, including where it may support the development a competitive and cost-efficient hydrogen and renewable gas industry, or may create barriers; the proposed changes to the pipeline ring-fencing arrangements; and the proposed power to exempt remote pipelines.</p>	<p>A waste of time and effort. For the small number of biogas or hydrogen pipeline gas projects that could ever proceed without massive subsidy, it'll be better to use more targeted case by case regulation rather than attempting one piece of behemoth change to cover all scenarios.</p> <p>The <u>worst</u> possible way to foster a hydrogen industry is to add hydrogen to the gas mix to households, because electrification is rapidly becoming cheaper. The focus should be on hard-to-electrify sectors like high-temperature heating and long-haul transport.</p>
<p>2.2</p>	<p>What are your views on the proposed new light-handed access regime for blend processing facilities?</p>	<p>A waste of time and effort. For the small number of biogas or hydrogen pipeline gas projects that could ever proceed without massive subsidy, it'll be better to use more targeted case by case regulation rather than attempting one piece of behemoth change to cover all scenarios.</p>
<p>2.3</p>	<p>When developing the refined approach, a number of steps have been taken to minimise regulatory costs and risks for industry participants and new entrants. Do you think any additional steps are required? If so, please explain what they are and why they are required.</p>	<p>It's like putting lipstick on a pig. More lipstick is not the answer.</p>

2.4	<p>Do you agree with the AEMC's recommendations (see section 3.2) that the NGL be amended to:</p> <p>enable rules to be made so that AEMO can collect information for the purposes of the VGPR and capacity modelling from facilities that do not otherwise participate directly in the DWGM?</p> <p>limit the potential for the unintended application of the GSOO provisions in the NGL?</p> <p>If you disagree with either of these recommendations, please explain why.</p>	<p>Concur that more transparency via data to AEMO is a good thing.</p>
2.5	<p>Do you agree with the AER's recommendations (see section 3.2) that the NGL be amended to:</p> <p>accord the regulator the power to impose additional ring fencing requirements on a class of service providers or associates through a ring-fencing order?</p> <p>allow conditions to be imposed on minimum ring-fencing exemptions issued under the NGR?</p> <p>If you disagree with either of these recommendations, please explain why.</p>	<p>A waste of time and effort. For the small number of biogas or hydrogen pipeline gas projects that could ever proceed without massive subsidy, it'll be better to use more targeted case by case regulation rather than attempting one piece of behemoth change to cover all scenarios.</p> <p>The <u>worst</u> possible way to foster a hydrogen industry is to add hydrogen to the gas mix to households, because electrification is rapidly becoming cheaper. The focus should be on hard-to-electrify sectors like high-temperature heating and long-haul transport.</p>
2.6	<p>Are any transitional arrangements required in the NGL to accommodate the extension to covered gases? If so, explain what they are and why they are required.</p>	<p>A waste of time and effort. For the small number of biogas or hydrogen pipeline gas projects that could ever proceed without massive subsidy, it'll be better to use more targeted case by case regulation rather than attempting one piece of behemoth change to cover all scenarios.</p>
Related to:	Proposed extension of the NERL and National Energy Retail Regulations	n/a

3	<p>What are your views on the refined approach to extending the NERL to covered gases (see section 3.3)? Where appropriate, please comment in relation to the questions below.</p>	<p>A waste of time and effort. For the small number of biogas or hydrogen pipeline gas projects that could ever proceed without massive subsidy, it'll be better to use more targeted case by case regulation rather than attempting one piece of behemoth change to cover all scenarios.</p>
3.1	<p>What are your views on the approach to identifying NGEs and defining prescribed covered gases?</p>	<p>Part of my career involved being the Regional Product Quality Advisor for Asia Pacific for a few years.</p> <p>I've seen some nasty product quality incidents (including with LPG) where contaminants that were not considered in the original 'fit for use' product quality specifications came in via new pathways and caused regional disruption to product use.</p> <p>Once again, I simply do not believe it possible for national regulations to cover all contingencies and use scenarios.</p>
3.2	<p>What are your views on the separate authorisation and exemption of natural gas and NGEs (as one group) and prescribed covered gases (as separate products)?</p>	<p>Part of my career involved being the Regional Product Quality Advisor for Asia Pacific for a few years.</p> <p>As a consumer I would be very wary indeed of any gas that claimed to be 'natural gas equivalent' if burning it in my own home (or business). I've seen some nasty product quality incidents (including with LPG) where contaminants that were not considered in the original 'fit for use' product quality specifications came in via new pathways and caused regional disruption to product use.</p> <p>Once again, I simply do not believe it possible for national regulations to cover all contingencies and use scenarios.</p>

3.3	Are any transitional arrangements required in the NERL to accommodate the extension to covered gases? If so, explain what they are and why they are required.	A waste of time and effort. For the small number of biogas or hydrogen pipeline gas projects that could ever proceed without massive subsidy, it'll be better to use more targeted case by case regulation rather than attempting one piece of behemoth change to cover all scenarios.
-----	---	--

Feedback on proposed changes to the National Gas Law (see Attachment A and Chapter 4)

I don't see how most of this exercise is in the interest of consumers. The imperative of climate change is to transition off fossil fuels as fast as possible.

Revision of the National Gas Regulatory Framework should explicitly address:

- Current and foreseeable targets for climate, emission reduction and energy efficiency at State and Commonwealth levels.
- The rapid fall in gas use due to the energy transition that is underway of both electrification and energy efficiency.
- The need to avoid unnecessary capital expenditure, and later recurrent expenditure, on the gas supply network. The gas network is now entering its "end of life" phase. There should be no money or effort spent on further expansion of it.
- The need to plan for decommissioning the gas network.
A key part of this is to ensure that the last residents to disconnect (renters, pensioners, low income etc) aren't left carrying the ongoing fixed and maintenance costs of the reticulated gas system.
- The need to avoid upgrades to household gas appliances other than to replace them with electric equivalents.
- The definition of hydrogen blends and other gases stating the carbon intensity of
 - their production method and
 - their carbon emissions when burnt.
 Consumers want transparent information about products they buy - this must include gas blends.

The Official's Paper is inadequate or silent on all these important issues.

The problems with the approach of "blending (even green) hydrogen into natural gas to end customers helps with the climate transition" are as follows:

- A. It's a dead end. What happens after 10% hydrogen is reached? There will be only 3% less energy used by the end consumer that's fossil fuel generated. That's even assuming that the 10% hydrogen is produced and transmitted 100% emission free...
 - a. For consumers, beyond 10% of hydrogen, then every home appliance will need to be modified or replaced. At that point why not fully electrify? So why not just move straight to electrification now?
 - b. For the pipelines, beyond 10% means that all the high pressure pipelines will need to be substantially upgraded to avoid embrittlement issues.

In Victoria, 100% hydrogen might require a total rebuild of significant parts of the Victorian Transmission System (~2,000 kms) and the distribution pipelines (over 30,000 kms)

Plus, to deliver the same amount of energy means the lines either need to be much higher pressure or larger diameter. Neither of those options are cheap.

- c. 10% of hydrogen by volume is only 3% of the energy of the equivalent volume of natural gas. So why go to all this effort and work to make such a minor impact (3%) on natural gas consumption?

B. It's expensive and slow.

- a. Capital is required for hydrogen injection & blending facilities, and also to reinforce the pipelines to be able to cope with even 10% hydrogen. Modifying a 'live' system is technically challenging, especially for natural gas pipelines.
- b. Much technical expertise and effort is required to focus on the issues required with changing a national energy system with many nodes and varying levels of consumer sophistication.
- c. Hydrogen or biogas is expensive to generate. Numerous studies have shown that home energy use is the least justifiable use for green hydrogen. It is better to use the energy used to make green hydrogen as simple green electricity.

The worst possible way to foster a hydrogen industry is to add hydrogen to the gas mix to households, because electrification is rapidly becoming cheaper. The focus should be on hard-to-electrify sectors like high-temperature heating and long-haul transport.

Feedback on proposed changes to the National Gas Regulations

[See above](#)

Feedback on proposed changes to National Energy Retail Law (see Attachment A and Chapter 5)

[See above](#)

Feedback on proposed changes to the National Energy Retail Regulations

[See above](#)