



Climate Action Merribek
P.O. Box 381
Fawkner Vic 3060
27 November 2023

To: Future Gas Strategy Taskforce
Email: GasOptions@industry.gov.au

Submission on Future Gas Strategy for Australia

We appreciate this opportunity to make a submission on The Future Gas Strategy for Australia.

We are a grassroots group of citizens in the municipality of Merri-bek in Melbourne's Northern suburbs active on climate advocacy since 2008..We bring our own experience as residential gas users, and also knowledge of climate science and need for rapid decarbonisation to address the climate emergency.

John Englart
Convenor, Climate Action Merribek
for and on behalf of Climate Action Merribek

Executive Summary

Our key insights and recommendations for a Future Gas Strategy:

1. Future Gas Strategy should be driven by science and need to phase out fossil fuels.
2. Domestic and business gas users should electrify as quickly as possible
3. The health impacts of using gas should be more actively promoted.
4. Energy retailers should be banned from advertising Fossil Gas.
5. There should be a phase out transition period for the sale of gas based consumer appliances.
6. Incentive programs should be available to overcome cost barriers for consumers and businesses for electrification upgrade of appliances.
7. Extend Victoria's Ban new gas connections for both residential developments and state government buildings nationally.
8. Roll out Grid batteries and pumped hydro-electricity to firm renewables as an alternative to gas in electricity production.
9. Green hydrogen may have a role as a long term storage fuel for power, Main priority for Green hydrogen should be in decarbonising fertilisers, chemical feedstock for oil refining and petrochemical production, green metals manufacturing, including steel and aluminium, and ammonia as a fuel for shipping.
10. A small role for carbon capture, utilisation and storage in hard to abate sectors and industrial processes where electrification and hydrogen use is unsuitable. That should not be extended to justification for new coal, oil or gas projects.
11. For LNG producers, the first-order task is for fossil fuel companies to slash emissions from company operations (without recourse to land based offsets).
12. LNG plants should upgrade to electrification of liquefaction process to reduce emissions
13. Accurate independent reporting of all CO₂ emissions in LNG supply chains, and what efforts have been made to decarbonise those supply chains.
14. Decarbonise LNG shipping by use of green ammonia as a fuel.
15. We see no future in methane + hydrogen blends or hydrogen in the residential and commercial sector established gas distribution pipe network.
16. Australia should be talking with nations buying our gas on their climate targets and transition plans. Gas needs to be managed both from a demand side and a supply side, and the least bumpy route for this is through collaboration and cooperation..
17. LNG production needs to be phased out in the long term to be replaced by export of green hydrogen, ammonia, processed metals, critical minerals, and some direct energy export (via High Voltage DC underwater cables to Asia).
18. LNG Company Operations should be decarbonised without using land use measures (offsets)

19. Australia should not consider releasing more acreage for exploration for gas, based on the climate science and climate targets
20. The PRRT needs to be amended to increase the return from windfall profits from existing offshore gas fields.
21. Australia should agree to the Port Vila Call for a Just Transition to a Fossil Fuel Free Pacific.
22. Australia should join the call for a Fossil Fuel Non-Proliferation Treaty
23. Enact better Lobbying laws for transparency,
24. Enact real-time political donations register with a cap on donations.
25. Transparency on domestic and total emissions for each project,
26. Reduce and manage fugitive emissions as per Global Methane Pledge.
27. Update methodology for reporting methane emissions to reflect under-reporting bias.
28. Human rights and environmental protection must be accorded maximum consideration in project consultation and development.
29. Carbon Capture and Storage should not be used to justify new gas field development. There are commercial risks, permanence risks, which are ultimately transferred to the public domain. CCS has a niche role in hard to decarbonise industrial processes.
30. CCS projects need to have continuous independent monitoring, and extensive backup plans.
31. LNG import terminals should not be considered.
32. Gas shortages predicted for 2026-2027 for Victoria are due to a lack of Gas reservation policy for the East Coast gas distribution network. This has been a failure in government oversight and regulation of the gas sector and managing gas production for domestic use. A local east coast gas reservation policy should be introduced, similar to the policy operating in Western Australia.
33. Need for an active electrification program at State and Federal levels for all states and particularly Victoria to move off residential and business gas use and consumption.
34. The workforce for fossil fuels is highly skilled, but there is no reason many of these people could not transfer into high paying jobs in Critical Minerals exploration and mining and clean energy such as offshore wind farm development and maintenance. Some transitional training may be useful.
35. Transitioning off gas is a decreasing user base/ upward price spiral. The transition of gas should be closely managed and regulated by governments, but the transition is essential to make. Victoria's Gas Substitution Framework provides some guidance for action at the Federal level and other states.

Gas Use in Australia

Consumers (domestic)

1. Do you use any international and/or domestic forecasts to inform your outlook of the gas market? We want your views on which scenarios best reflect the demand outlook. Are there any limitations or additional factors impacting the demand outlook you would like to note?

Our major concern is tackling greenhouse gas emissions to mitigate climate change. We have an escalating climate Emergency. We need to transition as rapidly as possible off fossil fuels, which includes moving off gas.

The science on fossil fuel extraction and climate targets is very clear: we should not be opening ANY new coal or gas fields.¹

We are aware of the IEA three main modelling scenarios: The Stated Policies Scenario (STEPS), The Announced Pledges Scenario (APS), and The Net Zero Emissions by 2050 (NZE) Scenario. Given the extent of the climate crisis we think an accelerated version of The Net Zero Emissions by 2050 (NZE) Scenario.²

We note the IEA describes this scenario as “a pathway for the global energy sector to reach net zero CO₂ emissions by 2050 without offsets from land-use measures. Advanced economies reach net zero emissions earlier than emerging market and developing economies, and universal access to electricity and clean cooking is achieved by 2030. There are also efforts to cut down on methane and other GHG emissions. The global average surface temperature rise peaks at just below 1.6 °C around 2040 and then gradually falls to 1.4 °C in 2100 (with a 50% probability).”

¹ See Welsby, D., Price, J., Pye, S. et al. Unextractable fossil fuels in a 1.5 °C world. *Nature* 597, 230–234 (2021). <https://doi.org/10.1038/s41586-021-03821-8>, <https://www.nature.com/articles/s41586-021-03821-8>
Nogrady, Bianca, *Nature*, 8 September 2021, Most fossil-fuel reserves must remain untapped to hit 1.5 °C warming goal <https://www.nature.com/articles/d41586-021-02444-3>
Kelly Trout et al (17 May 2022), Existing fossil fuel extraction would warm the world beyond 1.5 °C , *Environ. Res. Lett.* 17 064010, DOI 10.1088/1748-9326/ac6228, <https://iopscience.iop.org/article/10.1088/1748-9326/ac6228>

² IEA, 23 November 2023, Oil and gas industry faces moment of truth – and opportunity to adapt – as clean energy transitions advance <https://www.iea.org/news/oil-and-gas-industry-faces-moment-of-truth-and-opportunity-to-adapt-as-clean-energy-transitions-advance>

We note Climate Analytics have assessed that globally peak gas may occur in 2024. This will have implications for the commercial viability and risks in any new gas production brought online.³

The 2023 UNEP Production Gap and Emissions Gap reports also highlight the disconnect between approving new fossil fuel production (such as new gas fields) and meeting the Paris Climate Targets.⁴⁵

2. What role do you see gas-fired generators playing in supporting Australia's 82% renewable energy targets and beyond?

Gas-fired peak generators have a small existing role to play in Australia's electrical grids. This is likely to continue into the medium future as the renewables based grid is built, and grid batteries, and pumped hydro solutions are installed and ramped up to replace the ageing coal fired power plants.

3. How will the expected trends in demand from gas-fired generators impact other gas users?

4. What should government do to consider managing these impacts and to mitigate energy peaks caused by regional or seasonal variations?

5. How feasible, and at what scale, are alternatives to natural gas for the electricity sector? You may wish to consider renewable gas alternatives for peaking generation, for example, biomethane and low-emissions hydrogen and other forms of grid-firming technologies like batteries and pumped hydroelectricity. What barriers exist to using these alternatives?

Grid batteries and pumped hydroelectricity are the two main alternatives to gas in the electricity sector. We note the list of 22,000 possible pumped hydro energy sites found by researchers in 2017.⁶ Some of these sites need further investigation and follow up to provide an alternative to gas.

³ Climate Analytics, 22 November, 2023, When will global greenhouse gas emissions peak?
<https://climateanalytics.org/publications/when-will-global-greenhouse-gas-emissions-peak>

⁴ United Nations Environment Programme (2023). Emissions Gap Report 2023: Broken Record – Temperatures hit new highs, yet world fails to cut emissions (again). Nairobi.
<https://doi.org/10.59117/20.500.11822/43922>.

⁵ UNEP, 8 November 2023, Production Gap Report 2023,
<https://www.unep.org/resources/production-gap-report-2023>

⁶ Blakers and Stocks, Arena, Sept 2017,
<https://arena.gov.au/assets/2018/10/ANU-STORES-An-Atlas-of-Pumped-Hydro-Energy-Storage-The-Complete-Atlas.pdf>

Green Hydrogen is a flexible fuel with many uses. It needs to be prioritised for use where it can most efficiently decarbonise processes and present use of fossil gas and oil.

There may be a place for renewable generated hydrogen in the electricity sector as a long term storage fuel as an alternative to using gas in peaking plants in the medium term.

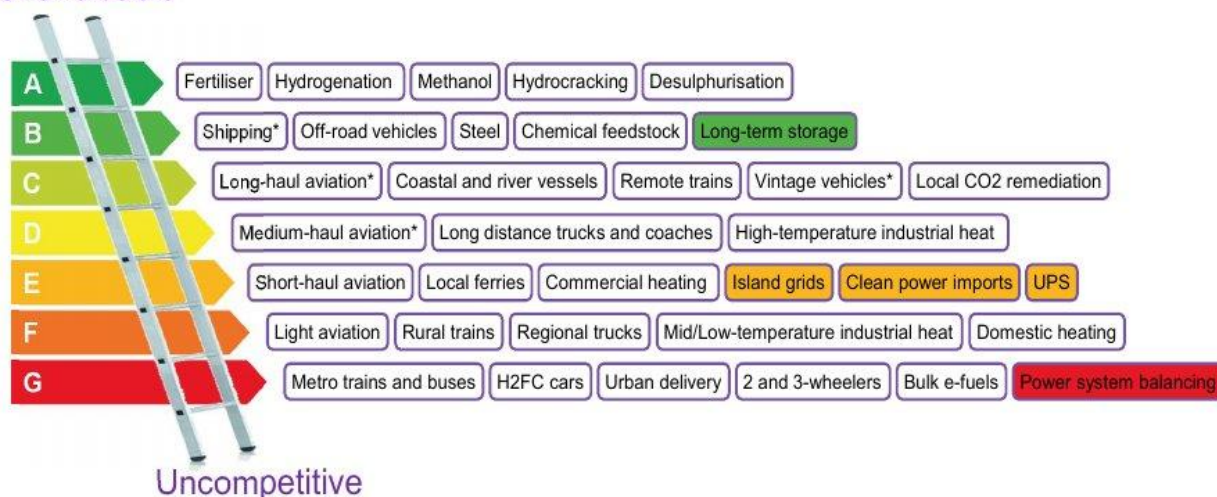
Hydrogen electrolyzers need manufacturing. and should be sited where the hydrogen can be used as a fuel in a peaker plant to avoid the problems and losses in hydrogen pipeline transport. .

The main role for green hydrogen should be in replacing the chemical and industrial processes where gas and coal are used to make hydrogen. This includes fertiliser production, oil refining and petrochemicals production, methanol and ammonia production. It likely has a role in reducing emissions in manufacturing green steel and green aluminium. It will help decarbonise shipping through using ammonia, and may have a role in long haul road freight. See the work by Michael Liebreich of Bloomberg NEF on the Clean Hydrogen Energy Ladder⁷, in particular his assessment of use of green hydrogen in the power system (below)

Clean Hydrogen Ladder: Power system

Liebreich Associates

Unavoidable



* Via ammonia or e-fuel rather than H2 gas or liquid

Source: Liebreich Associates (concept credit: Adrian Hiel/Energy Cities)

4 15 August 2021

Clean Hydrogen Use Case Ladder – Version 4.0

@mliebreich

⁷ Michael Liebreich, The Clean Hydrogen Ladder [Now updated to V4.1]
<https://www.linkedin.com/pulse/clean-hydrogen-ladder-v40-michael-liebreich/>

6. How much longer will you continue using gas as a fuel source or feedstock for your business? Do you think your consumption of gas will decline over time, and if yes, at what rate?

We advocate that domestic and business gas users should electrify as quickly as possible. Some of us have already made that transition, ending our residential gas consumption.

Barriers include the costs involved in upgrading gas heaters to heat pumps, gas hot water to inverter or solar electric hot water systems, and gas stoves and cooktops to electric fan forced ovens and induction cooktops. These barriers are possible to overcome if you own or buying a property, but become very difficult to do if renting to get landlords to upgrade.

There needs to be incentive programs to help citizens and businesses to transition off gas appliances

Sometimes there are solutions such as the use of single induction hot plates are viable for renters facing a landlord unlikely to spend money on gas cooktop appliance electrification.

7. Are there alternatives that your business can use instead of gas (for example electrification, hydrogen, biomethane or circular economy inputs)? What barriers exist to using these alternatives? How can the substitution of gas be accelerated?

8. What factor/s influence your willingness to adopt electric appliances or processes? How could governments support small businesses to decrease gas consumption?

There needs to be incentives for businesses, landlords for upgrading appliances from gas to electric.

9. What role might carbon capture, utilisation and storage (CCUS) and negative emissions technologies (NETs) (for example direct air capture and CO2 removal) play in decarbonising industrial processes that are hard to abate in your business or industry?

There is a small role for carbon capture, utilisation and storage in hard to abate sectors and industrial processes where electrification and hydrogen

use is unsuitable. That should not be extended to justification for new coal, oil or gas projects. Carbon sequestration and storage underground is still problematic in ensuring permanence, with risks after the initial injection project passed to the public.

Community

10. If your home or small business gas appliances (stove, heating, or hot water system) stop working, would you prefer to keep using gas or switch to an electric appliance? If you are unsure, what would help you decide? What factors influence your willingness to switch to electric appliances?

Health co-benefits in moving away from gas appear to be ignored. We highlight the Climate Council 2021 report Kicking the Gas Habit, How Gas is Harming Our Health.⁸

We support the Victorian government ban on new gas connections for both residential developments and state government buildings such as schools, hospitals and police stations, starting from 2024. Any new gas connections for business or industrial process should need to be thoroughly justified before approval by state or local government authorities.

11. How can governments, industry and households work together to manage impacts for homes?

The health impacts of using gas should be more actively promoted. Energy retailers should be banned from advertising Fossil Gas. There should be a phase out transition period for the sale of gas based consumer appliances. Incentives should be available for consumers and businesses to do electrification upgrade of appliances.

Australian LNG in the world's transition to net zero

Producers

12. What do you see as the role of gas in Australia's net-zero transformation?

⁸ Professor Hilary Bambrick, Dr Kate Charlesworth, Dr Simon Bradshaw and Tim Baxter, (May 2021) Kicking the Gas Habit: How Gas is Harming Our Health, Climate Council.
<https://www.climatecouncil.org.au/resources/gas-habit-how-gas-harming-health/>

Fossil Gas is not a transition fuel. It needs to be phased out as quickly as possible.

13. What action is your industry or company taking to reduce greenhouse gas emissions and does gas use have a role to play?

14. How can Australian LNG accelerate global decarbonisation without compromising energy security or affordability?

The first-order task highlighted by the IEA report -*The Oil and Gas Industry in Net Zero Transitions* - is for fossil fuel companies to slash emissions from company operations. "While there is no single blueprint for change, there is one element that can and should be in all company transition strategies: reducing emissions from the industry's own operations.... The production, transport and processing of oil and gas results in just under 15% of global energy-related greenhouse gas emissions. "

"To align with a 1.5 °C scenario, these emissions need to be cut by more than 60% by 2030 from today's levels and the emissions intensity of global oil and gas operations must near zero by the early 2040s."

This should certainly apply to Australian LNG operations.

We note the role of LNG processing in boosting Stationary Energy emissions. "An important driver of emissions trends in stationary energy over the last 8 years has been the production of LNG for export. Figure 9 shows that LNG exports have increased by 231% compared to the year to June 2015, before the start of the rapid ramp-up."

See below for the trend in Stationary Energy Emissions and LNG Export from the Quarterly Update of Australia's National Greenhouse Gas Inventory: March 2023.⁹

We note that during LNG processing CO₂ needs to be removed. This can amount to 5% to 15% CO₂ on a molar basis. Gorgon using CO₂ removal during pre-treatment, but the carbon capture and storage has substantially failed to meet the 80% target originally set for the first five years of operation, and is still performing well below targets according to recent data.

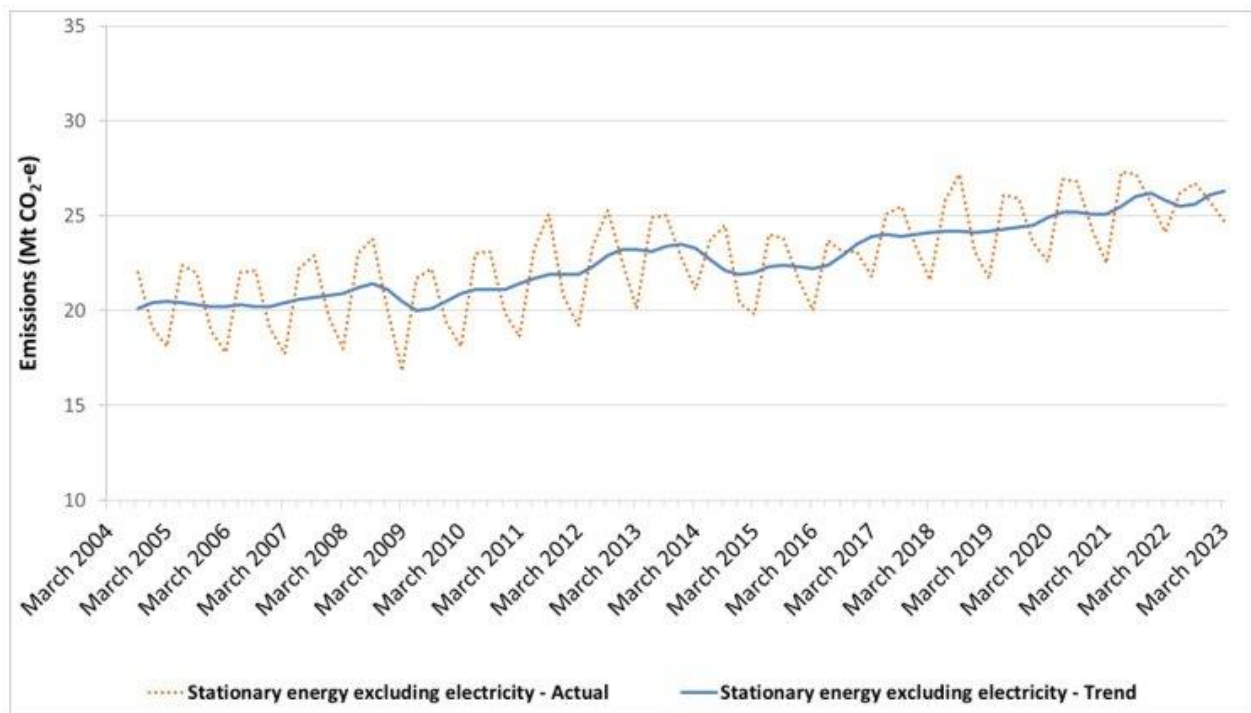
⁹ DCCEEW, Quarterly Update of Australia's National Greenhouse Gas Inventory: March 2023
<https://www.dcceew.gov.au/climate-change/publications/national-greenhouse-gas-inventory-quarterly-update-march-2023>

We note the IEA advises that electrification of liquefaction process would reduce emissions “Another way to lower emissions from LNG is to electrify the liquefaction process. Traditional natural gas liquefaction processes use gas turbines or internal combustion engines to drive the liquefaction refrigeration cycle. Electrification involves replacing these with electric motors, and these can be powered either by low-emissions electricity from the grid or dedicated renewable installations backed by batteries or thermal back-up power. A handful of projects have been pursued in this space, such as Freeport LNG in the United States, LNG Canada, Hammerfest LNG in Norway and Curtis Island in Australia, albeit with mixed levels of implementation success to date.”

The IEA estimates that 60% of the world’s LNG export terminals in operation in 2030 in the NZE Scenario can be electrified, at a total cost of around USD 20 billion.

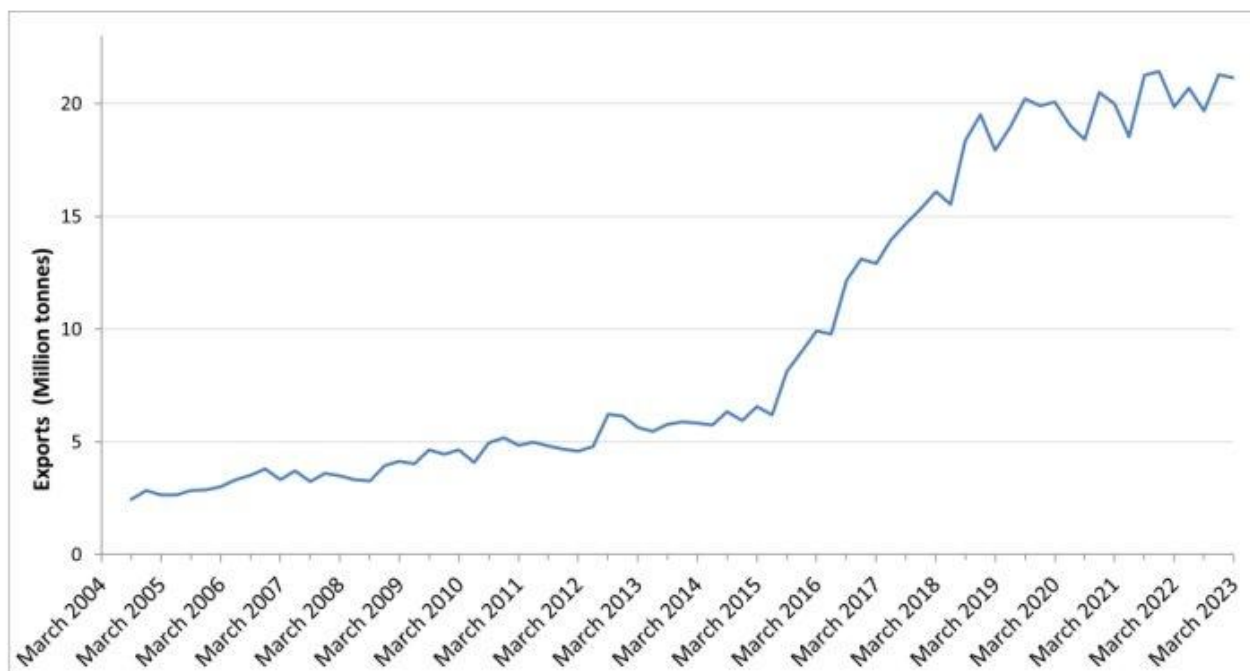
The IEA also suggests that LNG terminals be upgraded with net zero transitions to convert them to be hydrogen-ready.

Figure 8: Stationary energy excluding electricity emissions, actual and trend, by quarter, September 2004 to March 2023



Source: Department of Climate Change, Energy, the Environment and Water

Figure 9: LNG exports, by quarter, September 2004 to March 2023



Source: Department of Climate Change, Energy, the Environment and Water

15. What measures will increase the transparency of LNG supply chains, including their environmental, social and governance impacts?

We need accurate independent reporting of all CO2 emissions in LNG supply chains, and what efforts have been made to decarbonise those supply chains..

16. Does current gas transport and storage infrastructure support the changing role of gas in the residential and commercial sector? If inadequate, what is needed and who should provide the change?

We don't think renewable hydrogen should be added to gas in the gas pipeline network. Hydrogen can only be added to fossil gas (methane) in relatively small quantities (up to 10%) before it impacts the pipe network (increase in brittleness). Building a residential hydrogen network would be prohibitively expensive and inefficient.

We see no future in methane + hydrogen blends or hydrogen in the residential and commercial sector delivery by pipe network.

Consumers (international)

17. What role will LNG – and Australian LNG in particular – play in your economy's energy transition?

Australia should endeavour to talk to other nations who are our gas consumers. Countries should be encouraged to set a net-zero commitment, if they have not already done so, in their NDC. Australia should offer to assist in energy transition plans involving reducing gas use by developing national renewable energy sources, as appropriate. Gas needs to be managed both from a demand side and a supply side, and the least bumpy route for this is through collaboration and cooperation.

18. What is your economy's current LNG demand and how do you predict this will change through to 2035 and beyond to 2050?

19. What options should the Australian Government consider to ensure international investment in Australian LNG projects remains competitive?

20. What value do you place on low or net zero emissions LNG production?

LNG production needs to be phased out in the long term to be replaced by export of green hydrogen, ammonia, processed metals, critical minerals, and some direct energy export (via High Voltage DC underwater cables to Asia).

In the meantime, LNG Production process should look to be electrified through establishment of renewables power supply. Company Operations should be decarbonised without using land use measures (offsets)

We note the present Safeguard mechanism allows companies to use carbon credits to meet emissions reduction targets. We think this poses false accounting as carbon credits often come with integrity issues.

Oil and gas regulation in Australia

Producers

21. What is the role of offshore acreage releases in the context of consumer demand and emissions targets? What factors should the Australian Government consider when releasing acreage?

Australia should not consider releasing more acreage for exploration. The science is clear: we do not need more fossil fuels. We already have enough

in production to cook the planet past the Paris Agreement Temperature targets.

22. How could the offshore petroleum regime be improved to meet the objectives of the strategy?

The PRRT needs to be amended to increase the return from windfall profits from existing offshore gas fields.

23. What are the major barriers and opportunities for new supply? How can the Australian Government prioritise, mitigate or manage these?

Australia should not be talking about new supply, when the science is clear that we do not need new fossil fuels..

Australia should agree to the Port Vila Call for a Just Transition to a Fossil Fuel Free Pacific.

Australia should join the call for a Fossil Fuel Non-Proliferation Treaty

24. What are some of the opportunities for gas production in Australia in the medium (to 2035) and long term (to 2050)? How could these necessary developments support decarbonisation consistent with achieving emissions reductions goals?

The IEA reports that under current national energy and climate pledges there is no need in aggregate for new exploration.

To meet 2050 net-zero pledges declines in demand are so steep that no new long lead-time conventional oil and gas projects are required. Some existing production would even need to be shut in. That means stranded assets and destruction of shareholder wealth.(IEA 2023)

Community

25. How can the Australian Government better communicate and provide more transparency to local communities regarding gas projects?

Enact better Lobbying laws for transparency,

Enact real-time political donations register with a cap on donations.

Transparency on domestic and total emissions for each project, how fugitive emissions will be reduced and managed, with a periodic report of the effectiveness of managing emissions.

Update methodology for reporting methane emissions to reflect major under-reporting bias.¹⁰ This is especially important regarding reducing methane fugitive emissions and Australia's commitment under the Global Methane Pledge.

26. What opportunities exist to improve engagement and consultation processes with industry?

27. How can all levels of governments better support the industry to engage with First Nations people and community groups?

First Nation people need to have more than consultation rights. Engagement needs to be more than tick the box. Human rights and environmental protection must be accorded maximum consideration.

Reducing emissions from Australian gas production

Includes consideration of carbon Capture and Storage

Producers

28. How can Australia support the potential for cost-effective, safe and verifiable CCS projects, including for the gas sector, other industries and our region?

There is excess expectations and reliance on CCUS and this is reflected by this question.

Carbon capture and storage is a 50 year old technology, but it has proved expensive to implement and limited efficiency in sequestration of CO2 emissions.

The Gorgon project in Western Australia was supposed to be state of the art carbon capture and storage but has underperformed by at least 50 percent in its first 5 years of operation according to IEEFA 2022 report.¹¹

¹⁰ Amandine Denis-Ryan, IEEFA, 5 July 2023, Gross under-reporting of fugitive methane emissions has big implications for industry

<https://ieefa.org/resources/gross-under-reporting-fugitive-methane-emissions-has-big-implications-industry>

¹¹ IEEFA, April 2022, Gorgon Carbon Capture and Storage - The Sting in the Tail,

<https://ieefa.org/wp-content/uploads/2022/03/Gorgon-Carbon-Capture-and-Storage-The-Sting-in-the-Tail-April-2022.pdf>

Gorgon injected only 1.71 million tons of CO₂ into underground storage in the 2022/23 fiscal year to June 30, 2023. That is well below the facility's planned annual capacity of 4 million tons per year, reports Energy Intelligence.¹² Chevron continues to provide promises of increased performance.

Only a third or so of the CO₂ from the Gorgon gas reservoir was reinjected underground in the last two years, failing Chevron's obligation to capture and inject at least 80% of the reservoir CO₂.

Here is what the IEA report says on Carbon Capture Utilisation and Storage:

"Carbon capture, utilisation and storage is an essential technology for achieving net zero emissions in certain sectors and circumstances, but it is not a way to retain the status quo. If oil and natural gas consumption were to evolve as projected under today's policy settings, this would require an inconceivable 32 billion tonnes of carbon captured for utilisation or storage by 2050, including 23 billion tonnes via direct air capture to limit the temperature rise to 1.5 °C. The necessary carbon capture technologies would require 26 000 terawatt hours of electricity generation to operate in 2050, which is more than global electricity demand in 2022. And it would require over USD 3.5 trillion in annual investments all the way from today through to mid-century, which is an amount equal to the entire industry's annual average revenue in recent years."

A recent IEEFA report from September 2023 found that Carbon capture remains a risky investment for achieving decarbonisation.¹³

Centre for International Environmental Law (CIEL) has assessed the Risks of Carbon Capture and Storage in a report. "Deep Trouble: The Risks of Offshore Carbon Capture and Storage. They explain the threat presented by a massive buildout of offshore CCS infrastructure and uncovers the government financing and fossil fuel interests enabling and advancing this new wave of projects. The report concludes that governments must halt the expansion of offshore CCS by ending subsidies and support for these projects, while interpreting existing laws and strengthening emerging regulations to protect the oceans from absorbing even more of humanity's waste and safeguard communities, the environment, and the global climate."¹⁴

¹² Energy Intelligence, 17 Nov, 2023, Chevron to Tackle CCS Shortfall at Gorgon LNG
<https://www.energyintel.com/0000018b-dbe8-dac7-a7ab-dffad0860000>

¹³ Bruce Robertson, IEEFA, September 2022, The Carbon Capture Crux – Lessons Learned
<https://ieefa.org/resources/carbon-capture-remains-risky-investment-achieving-decarbonisation>

¹⁴ Lindsay Fendt, Nikki Reisch, and Steven Feit, Centre for International Environmental Law (CIEL), 16 November 2023, Deep Trouble: The Risks of Offshore Carbon Capture and Storage
<https://www.ciel.org/reports/deep-trouble-the-risks-of-offshore-carbon-capture-and-storage-november-2023/>

Community

29. How can the Australian Government better communicate and provide more transparency to local communities regarding CCS projects?

CCS must demonstrate long term permanence in storage.

If the CO₂ leaks to the surface, even in decadal time frames, it undoes the sequestration of carbon effort and adds to the climate crisis.

Unfortunately companies are usually held responsible for a certain time frame, and after that the risk is transferred to the public. This needs to be made transparent.

CCS projects need to have:

- continuous independent monitoring, extensive backup plans,
- money available to implement backup plans.
- Under the Polluters Pay principle any failure and addressing that failure should be at the company expense.

Gas transportation and infrastructure

Distributors and LNG import terminal project proponents

30. How fit for purpose is Australia's gas transmission and distribution network?

31. What changes should be made to the transmission and distribution network to prepare for the changing profile of gas demand in Australia? What risks and opportunities would this entail?

32. Could the construction of LNG import terminals contribute to improving energy security in Australia?

LNG import terminals should not be considered.

Gas shortages predicted for 2026-2027 for Victoria are due to a lack of Gas reservation policy for the East Coast gas distribution network. Gas companies have oversold gas to the export market in long term contracts. This has been a failure in government oversight and regulation of the gas sector and managing gas production for domestic use.

A local east coast gas reservation policy should be introduced, similar to the policy operating in Western Australia.

There needs to be an active electrification program at State and Federal levels for all states and particularly Victoria to move off residential and business gas use and consumption.

A report by IEEFA (16 November 2023) argues that Reducing demand is A better way to bridge the gas supply gap.¹⁵ The report argues

- Untapped, cost-effective interventions to improve gas efficiency and expedite electrification could slash gas demand by more than 40% by 2030 in Australia's southern states' residential buildings and industry.
- These reductions could more than eradicate the anticipated gas supply gap, while also bringing energy bills down, alleviating Australia's cost-of-living crisis.
- Increasing gas supply will instead come at a high cost that would have to be recovered through energy bills, while also undermining governments' emissions reduction efforts.
- Ending sales of new gas appliances as soon as possible would deliver the largest reduction in gas demand while also materially reducing household bills.

Dr Carl Tidemann, Senior Researcher at the Climate Council, in March 2023 countered Bowen gas shortage argument (Australia doesn't need new gas - Climate Council Responds to AEMO report):¹⁶

"Australia does not have a gas shortage problem. Australia produces five times more gas each year than we use at home. In fact, 80 percent of Australia's gas is exported or used by the gas industry itself.

"It's preposterous to consider expanding gas when the bulk of it is being sent abroad. More gas will not only have disastrous climate consequences, but will continue to expose Australian households to the volatile energy prices we've experienced over the last two years.

¹⁵ Amandine Denis-Ryan, IEEFA, 16 November 2023, Reducing demand: A better way to bridge the gas supply gap <https://ieefa.org/resources/reducing-demand-better-way-bridge-gas-supply-gap>

¹⁶ Climate Council, March 2023, Australia doesn't need new gas - Climate Council Responds to AEMO report <https://www.climatecouncil.org.au/resources/australia-doesnt-need-new-gas-climate-council-responds-aemo-report/>

“As one of the sunniest and windiest countries on earth, the future of our energy is from renewables backed up by various energy storage technologies, including batteries and pumped hydro.”

We endorse the Climate Council recommendations:

- from 2025, governments should end all new gas connections to homes and require all-electric replacement appliances.
- immediate roll out of interest free loans to electrify households, so that Australian families can save up to \$1900 a year on power bills.

33. Under what conditions would LNG import terminals be commercially viable in Australia?

We think under the The Net Zero Emissions by 2050 (NZE) Scenario, which Australia should be pursuing at a climate policy level, LNG import Terminals would be not viable. They would be a highly risky commercial venture at risk of being a stranded asset.

Royalties and revenue, gas workforce and LNG facilities

Producers and LNG facilities

34. Are you able to attract and retain the workforce and skills you need? How will these shift as we transition to net zero emissions?

The IEA recent report outlines there are many skills in the Fossil Fuel workforce that can be used productively in the clean energy transition. These include in the development of renewable hydrogen and hydrogen-based fuels; offshore wind farm development and maintenance; liquid biofuels; biomethane; geothermal energy and exploration and mining in critical minerals.

The workforce for fossil fuels is highly skilled, but there is no reason many of these people could not transfer into high paying jobs in Critical Minerals exploration and mining and clean energy. Some transitional training may be useful.

35. What are your long-term business and investment plans beyond 2035? How might these affect local economies, employment and communities?

36. Describe the projects or best practice examples of industry engagement with the local community, as well as the benefits these projects bring to the people and regional economy.

Community

37. How has the oil and gas industry impacted the local economy and employment opportunities in your region?

38. What actions will assist workforce retention, upskilling and mobility in your community as the economy transitions to net zero emissions?

Domestic gas supply

Consumers (domestic)

39. What are the risks to Australia's domestic gas security in the medium (to 2035) to long term (to 2050) for your industry and how can these be addressed?

We need to aim for most residential and business users to move off gas in the medium term (2035). Decarbonisation of industrial processes may take longer period but should be achieved in the long term (2050)

40. What do you see as the biggest risk to the ongoing affordability of Australia's domestic gas supply? For example, what are risks to affordability in the wholesale or retail market?

As more residents and businesses move away from gas through electrification, the gas network rests on less users which will act to drive up prices, further motivating more end users to move off gas. This is a decreasing user base/ upward price spiral. The transition of gas should be managed and regulated by governments, but the transition is essential to make. Victoria's Gas Substitution Framework provides some guidance for action at the Federal level and other states.

41. What reforms can be made at a Commonwealth, state, territory, or industry level to allow gas supply to be more responsive to domestic demand signals?

Demand and supply need to be regulated and managed by governments to moderate price spikes in the energy transition.

42. What actions are available to lower gas costs, including substitution and new supply, to provide certainty to consumers? How would these actions further the Australian Government's decarbonisation goals?

43. What opportunities exist in your industry to decarbonise supply chains?

44. Do you use any forecasts of gas supply to inform your outlook of the gas market? If so, what are they? You may also wish to consider whether these forecast

scenarios consider the technical and commercial uncertainties associated with gas reserves and resources. Which scenarios do you consider best reflect the supply outlook?

45. Are there any limitations or caveats associated with these scenarios? How do you address these limitations?