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ANMF (Vic Branch) Submission in response to EES Viva Gas Terminal in Corio Bay

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Australian Nursing and Midwifery Federation (ANMF) Victorian branch, background

The ANMF is Australia's largest national union and professional nursing and midwifery organisation. ANMF's eight state and territory branches represent the professional, industrial and political interests of more than 300,000 nurses, midwives and carers across the country.

ANMF (Vic Branch) has a membership of over 95 000 comprising nurses, midwives and personal care workers (however titled and working predominantly in the private residential aged care sector). Our members are employed in a range of health services and clinical specialties including hospitals, aged care, community health, mental health, maternal and child health, alcohol and other drug sector, medical clinics, prisons and the Australian Red Cross Blood Service.

The ANMF (Vic Branch) actively promotes action on climate change and environmental sustainability. Nurses, midwives and carers see daily the ways in which the community's health is inextricably linked to the health of our environment. Negative health impacts of climate change and environmental degradation affect the key social determinants of health and damage social and community structures. These negative health impacts in turn increase pressure on already burdened health services and our members.

ANMF (Vic Branch) welcomes the opportunity to submit to the Inquiry and Advisory Committee considering the environmental effects of the proposed Viva Energy Gas Terminal Project. We have been approached by members working and living in the Geelong region. Member concerns are welcomed, respected, and incorporated into this submission.

Our summary position is simple, Victoria must plan for a future without gas and ANMF (Vic Branch) does not support the Viva Energy Gas Terminal Project.

Fossil Fuels and Health

Climate change

The burning of fossil fuels has been deemed the primary cause of current climate change, altering the Earth's ecosystem and causing human and environmental health problems.¹

The role of methane in global warming is increasingly recognised. Methane is a powerful greenhouse gas with a 100-year global warming potential 28-34 times that of carbon dioxide. Measured over a 20-year period, that ratio grows to 84-86 times.² The EES operational projection for this terminal is 20 years.³

¹ <https://ugc.berkeley.edu/background-content/burning-of-fossil-fuels/>

²

<https://unece.org/challenge#:~:text=Methane%20is%20a%20powerful%20greenhouses,are%20due%20to%20human%20activities.>

³ VIVA Energy Gas Terminal Project, Environmental Effects Statement summary document, p.8

Fugitive methane emissions in the gas supply chain only need to be at 3.1% to make gas a worse emitter than coal. In 2019, the venting and flaring of methane accounted for a minimum of 6% of Australia's emissions⁴

In addition to the danger that gas adds to the climate crises in production and fugitive emissions, a recent study, found that gas stoves bleed methane into the atmosphere even when they are not in use⁵. This makes gas a bigger contributor to the climate crisis than previously understood.

Air quality

Research indicates that Victorians spend most of their time indoors, making indoor air pollutants an important risk factor for people's health.⁶ Homes with gas stoves have been found to have nitrogen dioxide NO₂ concentrations 50– 400 per cent higher than homes with electric stoves, leaving households relying on rangehoods of varying efficiency.⁷

A 2018 study led by University of Queensland researcher Luke Knibbs found that around 12 per cent of childhood asthma around the country can be contributed to gas cooking.⁸

Global warnings

1. United Nations Environment Programme 2019 report⁹ showed planned global production of coal, oil and gas would see the world far exceed the Paris Agreement targets.
2. International Energy Agency (IEA) Net Zero by 2050 report released 2021¹⁰ warns investors must avoid funding any new oil and gas fields for the world to achieve the Paris Agreement's goal of limiting global temperature rises to 1.5 degrees. Fatih Birol, the IEA's executive director stated *"If governments are serious about the climate crisis, there can be no new investments in oil, gas and coal, from now – from this year."* And observed, *"a growing gap between the rhetoric [from governments] and the reality."*¹¹
3. United Nations secretary-general Antonio Guterres said scientific warnings, such as those contained in the IPCC Working Group 1 Report about the dramatic effect of human-induced climate change *"must sound a death knell"* for all fossil fuels *"before they destroy our planet"*.¹²

⁴ <https://theconversation.com/scott-morrison-gas-transition-plan-is-a-dangerous-road-to-nowhere-130951>

⁵ [Study finds gas stoves are a large contributor to climate crisis | World Economic Forum \(weforum.org\)](https://www.weforum.org/stories/2021/02/gas-stoves-air-pollution-climate-crisis/)

⁶ <https://www.betterhealth.vic.gov.au/health/healthyliving/air-pollution>

⁷ <https://thefifthestate.com.au/innovation/residential-2/cooking-with-gas-bad-for-the-planet-and-bad-for-your-health/>

⁸ [Gas stoves and damp houses increase Aussie asthma rates - Faculty of Medicine - University of Queensland \(uq.edu.au\)](https://www.uq.edu.au/news/gas-stoves-damp-houses-increase-australian-asthma-rates)

⁹ <http://productiongap.org/wp-content/uploads/2019/11/Production-Gap-Report-2019-Executive-Summary.pdf>

¹⁰ [Net Zero by 2050 – Analysis - IEA](https://www.iea.org/press-releases/net-zero-by-2050-analysis)

¹¹ [No new oil, gas or coal development if world is to reach net zero by 2050, says world energy body | Fossil fuels | The Guardian](https://www.theguardian.com/environment/2021/jan/28/no-new-oil-gas-coal-development-if-world-is-to-reach-net-zero-by-2050-says-world-energy-body)

¹² ['Death knell for coal': Reactions to the U.N. climate report | Reuters](https://www.reuters.com/article/energy-environment-climate-report/energy-environment-climate-report-idUSKCN250001)

4. The 2021 Climate Analytics report, *Why gas is the new coal*,¹³ found that gas was the largest source of carbon dioxide emissions increase in the past decade. According to the report, if the world is to avert a disastrous 1.5C of global heating, the use of gas should already be in decline. However, gas is projected to cause 70% of the fossil CO2 emissions increase by 2030 under current policies.
5. A report, led by Prof Kevin Anderson from the Tyndall Centre for Climate Change Research at Manchester University, states that we must rapidly shift away from a fossil fuel economy. *“Wealthy countries such as the UK, US and Australia have until 2034 to stop all oil and gas production to give the world a 50% chance of preventing devastating climate breakdown, while the poorest nations that are also heavily reliant on fossil fuels should be given until 2050.”*¹⁴

The international Council of Nurses

The international Council of Nurses has called on governments to *“reduce the risks they are expected to face from climate change by making choices in how they advance technology and industry and make investments in infrastructure and public policies that have less environmental impact.”*¹⁵

ANMF (Vic Branch) endorsement of the School Strike4Climate (SS4C) movement

A 2019 ANMF (Vic Branch) Union solidarity motion with the School Strike4Climate movement states recognition of climate change as an existential threat and global emergency (IPCC 2018) that requires immediate and wide-reaching action within the next decade to avoid disaster. ANMF (Vic Branch) has endorsed the SS4C demands for:

1. Net zero by 2030 which means no new coal, oil or gas projects including the Adani mine
2. 100% renewable energy generations and exports by 2030
3. Funding a just transition and job creation for all fossil-fuel workers and their communities

VIVA have entered into an agreement with Woodside, enabling Woodside to supply and regasify LNG to the east coast Australia market, exclusively using the proposed VIVA gas terminal in Geelong.¹⁶ Woodside’s Scarborough gas project has been labelled Australia’s biggest new fossil fuel investment in nearly a decade and would emit millions of tonnes of greenhouse gas annually at a time when countries are being urged to decarbonise.¹⁷

Investment in gas infrastructure will result in a prolonged exit from fossil fuels, delayed transition to renewables, resource diversion and stranded assets.

¹³ [Microsoft Word - Gas Is New Coal Nov 2021.docx \(climateanalytics.org\)](#)

¹⁴ https://www.theguardian.com/environment/2022/mar/22/rich-countries-must-stop-producing-oil-and-gas-by-2034-says-study?utm_source=News+Wrap&utm_campaign=4009ed2cad-EMAIL_CAMPAIGN_2018_01_24_COPY_138&utm_medium=email&utm_term=0_4d9b03d80b-4009ed2cad-297451660&mc_cid=4009ed2cad&mc_eid=3cc6f51ce5

¹⁵ International Council of Nurses Position Statement: Nurses, climate change and health, last accessed 23.3.2022

¹⁶ <https://www.vivaenergy.com.au/media/news/2021/mou-agreed-with-woodside-to-progress-lng-regasification-agreement-viva-energy-signs-heads-of-agreement-for-fsru>

¹⁷ <https://www.abc.net.au/news/2021-11-22/woodside-scarborough-gas-project-under-fire/100570746#:~:text=The%20project%20E2%80%94%20which%20has%20been,gas%20would%20go%20for%20proce sing.>

An alternative to the Federal government gas fired “recovery.”

Shifting away from fossil fuels and associated infrastructure stands in stark contrast with the federal government position of “a gas-fired recovery” and “building a robust gas industry.”¹⁸ Even while Australian states struggle to recover from fires and floods, Angus Taylor has announced an additional \$50.4 million in subsidies to the gas industry to support the construction of more gas infrastructure.¹⁹

This subsidy is to an industry:

1. Whose exporters are accused of “failing to live up to a promise they would maintain sufficient local supply.”²⁰ Instead, Australia consistently ranks first, second or third as the world’s largest exporter of natural gas even while some caution domestic gas shortfall.²¹
2. Who are already heavily subsidized. Fossil fuel subsidies cost Australians a staggering \$10.3 billion in the financial year of 2020-21, more than we spend on the Australian army. Coal, oil and gas companies in Australia give the impression that they are major contributors to the Australian economy, but research shows that they are major recipients of government funds.²²

Just as Australian states needed to take the lead in declaring 2050 zero emission targets, so too should they with accelerating transition away from fossil fuel dependency, including gas reliance.

More gas does not mean cheaper prices.

An August 2020, an Australian Competition and Consumer Commission (ACCC) report showed that 18 LNG shipments, equal to 10 per cent of annual east coast demand, was sold at “prices substantially below domestic gas price offers”. Santos and Origin have been accused of preferring “to export gas for less than they can sell it for in Australia, rather than reduce prices to Australian customers.”²³

The gas industry will take any opportunity to maximise profits. This includes opening up new supply, developing new export markets, and mining harder to get more expensive unconventional coal seam gas for domestic market without genuine regard for domestic provision and equitable pricing.²⁴

Natural gas and coal are often pitched as more reliable fuels for power generation than renewables. This can lead to [supporting](#) new fossil fuel infrastructure—power plants, pipelines and import

¹⁸ [Gas-fired recovery | Prime Minister of Australia \(pm.gov.au\)](#)

¹⁹ https://reneweconomy.com.au/taylors-latest-50m-gas-subsidy-splurge-deplored-as-slap-in-the-face-for-flood-victims?utm_source=News+Wrap&utm_campaign=4009ed2cad-EMAIL_CAMPAIGN_2018_01_24_COPY_138&utm_medium=email&utm_term=0_4d9b03d80b-4009ed2cad-297451660&mc_cid=4009ed2cad&mc_eid=3cc6f51ce5

²⁰ https://www.brisbanetimes.com.au/business/companies/outlook-concerning-acc-c-warns-of-looming-gas-crunch-for-east-coast-20220322-p5a6tl.html?utm_source=News+Wrap&utm_campaign=4009ed2cad-EMAIL_CAMPAIGN_2018_01_24_COPY_138&utm_medium=email&utm_term=0_4d9b03d80b-4009ed2cad-297451660&mc_cid=4009ed2cad&mc_eid=3cc6f51ce5

²¹ https://www.advanceaustralia.org.au/australia_the_world_s_biggest_gas_exporter_faces_domestic_gas_shortage

²² <https://australiainstitute.org.au/post/australian-fossil-fuel-subsidies-hit-10-3-billion-in-2020-21/>

²³ <https://australiainstitute.org.au/post/australia-is-about-to-get-ripped-off-by-the-gas-industry-and-its-not-the-first-time/>

²⁴ <https://australiainstitute.org.au/post/australia-is-about-to-get-ripped-off-by-the-gas-industry-and-its-not-the-first-time/>; <https://www.abc.net.au/news/2020-02-12/coal-seam-gas-import-or-mining-will-not-guarantee-lower-prices/11954268>

terminals. This only increases dependency on fossil fuels and makes those economies more vulnerable to disruptions in global commodity markets.²⁵

The current world situation is that Europe is heading into a very cold winter with questionable access to traditional gas supplies from Russia. The Australian resources minister, Keith Pitt, has already flagged Australia as *“a leading and reliable global exporter of LNG... ready to assist.”*²⁶ Meantime, global LNG prices are expected to remain elevated and volatile.²⁷

The VIVA EES describes their *“long term”* vision to *“transform the Geelong Refinery into an Energy Hub.”*²⁸ Rather than perpetuating a fossil fuel hub and dependency, Australia has everything we need to take the lead and become a renewable energy export superpower. We have the winning combination of endless sunshine, plenty of space, powerful winds, world-class expertise and strong trade relationships.²⁹ Domestic renewables represent a crucial hedge against the volatility of globally traded fossil fuels and, unlike the constantly fluctuating cost of fossil fuels, have demonstrated consistently lower costs over time.³⁰

Summary of the VIVA proposal:³¹

The VIVA project comprises the development of a gas terminal using a ship known as a floating storage and regasification unit (FSRU) at Refinery Pier in Corio Bay, adjacent to Viva Energy’s Geelong Refinery.

The project would bring natural gas from other parts of the country and overseas to meet south-eastern Australian gas market demand.

Key components of the project:

- a. Extension of the existing Refinery Pier.
- b. Localised dredging, and deposition of dredged sediment at the existing Point Wilson dredged material ground.
- c. The FSRU continuously moored at the new berth, which would receive liquefied natural gas (LNG) from visiting LNG carriers, store and convert the LNG into natural gas when needed.
- d. A treatment facility located within the Geelong Refinery site where odorant and nitrogen (when required) is added.
- e. A 7-kilometre pipeline to transfer the gas from the FSRU to the Southwest pipeline connection point at Lara, comprising a 3-kilometre aboveground section and a 4-kilometre underground section.

²⁵ <https://ieefa.org/ieefa-russia-ukraine-conflict-adds-impetus-to-asias-energy-transition/>

²⁶ <https://www.theguardian.com/world/2022/jan/26/australia-could-send-extra-gas-to-europe-as-russia-cuts-supplies-due-to-ukraine-tensions>

²⁷ <https://ieefa.org/ieefa-russia-ukraine-conflict-adds-impetus-to-asias-energy-transition/>

²⁸ VIVA Energy Gas Terminal Project, Environmental Effects Statement summary document, p.5

²⁹ <https://www.wwf.org.au/what-we-do/climate/renewables>

³⁰ <https://ieefa.org/ieefa-russia-ukraine-conflict-adds-impetus-to-asias-energy-transition/>

³¹ [Viva Energy Gas Terminal Project \(planning.vic.gov.au\)](https://www.vivaenergy.com.au/~/media/1/2/0/12012022/VIVA_Energy_Gas_Terminal_Project_planning_vic_gov_au.pdf)

Questionable emissions accounting from VIVA

[Environment Victoria](#) have found a massive discrepancy with the carbon emissions that VIVA claim in their Environment Effect Statement (EES) that the project will generate. AGL's failed gas import terminal proposal's emissions were nine times larger, because they followed the internationally recognised standard for accounting for carbon emissions. VIVA is instead using 'creative counting' to arrive at their lower figure by excluding the emissions of transporting the gas to Geelong.³²

What do the people want?

Gas-related survey data from the Australia Institute's *Climate of the Nation 2020* found only 12% of Australians would prefer Australia's economic recovery to be primarily powered by gas, compared with 59% who prefer it to be powered by investment in renewables. The popularity of a renewables-led recovery was consistent across all states, genders, ages and voting intentions.³³

ANMF (Vic Branch) members are specific in their ambition for the Geelong region.

'Geelong should be a hub for renewables, not gas. We've got the infrastructure, skilled workforce and proud manufacturing heritage to position our region as the place for the rapidly growing clean energy industry.... Instead of relying on old technologies, there needs to be urgent focus on implementing and enhancing existing opportunities such as electrification initiatives using renewable electricity instead of gas. Household gas appliances can be replaced with electric appliances that are cheaper, cleaner and safer to run.'

Jobs and renewable energy opportunity

There are active sustainability groups in the Geelong region with renewables ambition. The Community Power Hub Barwon South West (CPH BSW) is one of seven Community Power Hubs across Victoria, administered by Geelong Sustainability and funded by Sustainability Victoria. The Community Power Hub is improving accessibility and involvement in community renewable energy projects across the Barwon South West region, with the aim of reducing carbon emissions and helping transition to a clean energy future.

The Geelong Renewables Not Gas (GRNG) group has developed a [Roadmap to Zero Emissions Geelong region Jobs analysis](#),³⁴ building on the Million Jobs Plan, by Beyond Zero Emissions. The report shows the 14 000 + employment opportunities that exist for the Geelong region if action is taken to transition the economy to zero emissions. In contrast to this, the VIVA gas terminal only identifies 150-200 jobs in construction with only 50-70 ongoing³⁵. Overall, it lacks community benefit while creating additional risk.

³² <https://geelongrenewablesnotgas.org/viva-energy-accused-of-climate-accounting-trick-as-geelong-gas-terminal-emissions-significantly-underreported/>

³³ <https://australiainstitute.org.au/wp-content/uploads/2020/12/Climate-of-the-Nation-2020-cover-WEB.pdf>

³⁴ <http://geelongrenewablesnotgas.org/zero-emissions-jobs-for-geelong/>

³⁵ VIVA Energy Gas Terminal Project, Environmental Effects Statement summary document, p.5

Recently the Berrybank Wind farm was launched, proudly featured in the Premier's media announcements. This large-scale renewable energy project has the potential to generate enough energy to power every home in greater Geelong while supporting more than 280 jobs during construction.

ANMF (Vic Branch) also recalls the green dialysis work that has been done in Barwon Health that our members participated in to harvest dialysis water for reuse.³⁶

Concerns expressed by ANMF (Vic Branch) members:

1. The role that fossil fuels, including gas, play in climate change:

Gas is a dangerous and polluting fuel that contributes to the climate crisis. LNG is Methane, which can be even worse for the climate than coal because it leaks into the atmosphere. This leaked gas traps more warmth, increasing our risks of severe heat, drought, bushfires and sea-level rise.

2. Proximity to households with risk of accident or terrorist attack:

The EES document contains that it will have few impacts to land holders.³⁷ It is the nature of many accidents that they were unforeseen and can happen despite best engineering and procedures. Incidents or terrorist attacks may occur anywhere along the route. LNG is hazardous by nature, being a 95% flammable methane gas. Not only is a transiting tanker easy to attack, risks multiply due to the proximity of other major hazard facilities including the VIVA refinery and a chemical import terminal at the end of the pier.

According to the Australian Government National Terrorism Threat Advisory System, last checked March 30th 2022, Australia's current national terrorism threat level is PROBABLE. "Credible intelligence, assessed by our security agencies, indicates that individuals or groups have the intent and capability to conduct a terrorist attack in Australia...explosives remain a favoured terrorist attack weapon."³⁸

There is precedent for this type of attack. The Limburg, in 2002 was hit by a small explosive laden dingy, releasing over 14 million litres of crude oil into the ocean which caught fire. Fortunately, this attack occurred in a remote location about 5km from the terminal, and while it did not impact the public, a crew-member was killed and a number injured.³⁹

The Geelong Renewables Not Gas (GRNG) also express concern about the significant safety risks of managing LNG near built up areas and point to a study commissioned by the US Department of Energy which identified three hazard zones around LNG tankers:

³⁶ <https://www.greendialysis.org/>

³⁷ VIVA Energy Gas Terminal Project, Environmental Effects Statement summary document, p.5

³⁸ <https://www.nationalsecurity.gov.au/national-threat-level/current-national-terrorism-threat-level>

³⁹ <https://geelongrenewablesnotgas.org/the-threat/safety-risks/>

Zone 1: within 500m. Significant chance of fatality for people with instantaneous exposure (due to fire, asphyxiation or freezing).

Zone 2: within 1.6km. Possibility that extended exposure would result in fatality

Zone 3: within 3.5km. Possibility of burns in the event that a vapour cloud extends into this zone and ignites.

GRNG state that at least 20,000 residents live within 3.5km of the import terminal and tanker routes.

There will be need for substantial safety training for those within project vicinity. Business and industry can be provided this through WorkSafe Victoria. What safety training will be provided to residents, and who has ownership for delivery? Concern has been expressed that this may also impact on home, business and personal insurances.

3. Environmental damage:

Members label floating gas terminals as a “*threat to marine life and fishing.*” The Victorian government has already rejected a gas terminal in Westernport Bay because of “*unacceptable risks*” to the marine environment.

There are concerns around local impacts like dredging the Bay, disturbing toxic sediments, and the impact of chlorine on the seagrasses and habitat. Seagrasses play a critical role *supporting* ecosystems and providing food and shelter for a rich assemblage of marine life.

The nearby internationally recognised Ramsar Wetlands are home to migratory birds whose instinctual patterns may be at risk from the 24/7 project illumination⁴⁰ and increase in industrial noise. Artificial light at night can alter daily activity patterns and affect organismal physiology, particularly hormone levels and stress responses. In some species, it interferes with orientation and navigation.⁴¹ There is also the unknown impact of near shore changes in water temperature⁴² and sedimentation on their feeding and roosting habits.

The Victorian government rejected AGL’s proposal for a similar gas import terminal at Crib Point in Westernport Bay because the release of chlorinated water posed “*unacceptable risks*” to the marine environment.

VIVA Energy has argued their gas terminal would reuse this chlorinated water in the refinery process, before releasing it back into the Bay. While different from AGL’s proposal, an independent environment assessment is needed.

⁴⁰ VIVA Energy Gas Terminal Project, Environmental Effects Statement summary document, p.8

⁴¹ <https://environmentalevidencejournal.biomedcentral.com/articles/10.1186/s13750-021-00246-8>

⁴² VIVA Energy Gas Terminal Project, Environmental Effects Statement summary document, p.5

4. Other jurisdictions have stringent and restrictive buffer zones. These restrictions, if applied to Corio Bay, would have a large impact on recreational users of the Bay.

Demand and supply issues

Victorian Labor initiatives

ANMF (Vic Branch) notes the investment of the Victorian government in driving energy efficiency and demand management. This includes:

1. 100% renewable energy for all Victorian government operations from 2025, including public hospitals and schools.
2. Measures targeting households and industry such as:
 - a. Victorian Energy Upgrades,
 - b. Home Heating and Cooling Upgrades
 - c. Energy efficiency upgrades are improving thermal performance
 - d. Minimum standards for heating in rental homes
 - e. Business Recovery Energy Efficiency Fund

Forecasts and modelling

1. Australian Energy Market Operator (AEMO)

The Australian Energy Market Operator (AEMO) has said that Australia already has the technical capacity for renewables to supply 75% of the electricity in the National Electricity Market (NEM) by 2025, should market and regulatory changes be delivered.⁴³

In late March, AEMO released the latest iteration of its Gas Statement of Opportunities (GSOO) indicating that domestic markets are expected to have access to sufficient supplies of gas until at least 2033, contrary to industry predictions of a shortfall, thanks to the accelerated uptake of renewables, the electrification of energy use, and energy efficient measures.

AEMO uses five scenarios to project demand use. The “*step change*” track is considered by stakeholders as the most likely and under latest scenario modelling, AEMO forecasts a drop of 16.8% in annual gas consumption in Victoria by 2026, with peak day demands forecast to reduce by about 18%⁴⁴.

AEMO has said that local gas supply shortfalls would only occur under “*extreme conditions*” when demand reaches extreme highs.⁴⁵ There is however the need for rapid shift to electricity, particularly

⁴³ <https://arena.gov.au/blog/75-renewable-nem-possible-by-2025-aemo/>

⁴⁴ <https://www.theguardian.com/australia-news/2022/mar/29/south-east-australia-risks-temporary-gas-shortages-by-2023-winter-energy-review-warns>

⁴⁵ https://reneweconomy.com.au/switching-to-renewables-is-most-effective-way-to-prevent-gas-shortfalls-aemo-says?utm_source=News+Wrap&utm_campaign=bb8a4ad1d1-EMAIL_CAMPAIGN_2018_01_24_COPY_143&utm_medium=email&utm_term=0_4d9b03d80b-bb8a4ad1d1-297451660&mc_cid=bb8a4ad1d1&mc_eid=3cc6f51ce5

for heating, and improved energy efficiency by next winter if we are to avoid the risk of “small, infrequent gas shortfalls under extreme one-in-20 demand conditions.”⁴⁶

There is concern that this project of gas supply and infrastructure, may delay progress towards renewable forms of energy through a reduced sense of urgency and acceptance of gas as a viable energy source.

2. Environment Victoria modelling

Environment Victoria commissioned a report⁴⁷ that outlines how Victoria can balance gas supply and demand and reduce household bills without opening new gas fields or polluting gas import terminals.

The modelling suggests an underestimation of the impact that energy efficiency programs have on Victoria’s annual gas consumption and estimates that Victoria could reduce its annual gas consumption by around half (98 to 113 PJ) by 2030, primarily by:

- a. replacing old gas ducted heating systems (estimated 48 PJ gas reduction)
- b. increasing use of existing air conditioners for space heating (5–15 PJ gas reduction)
Measures which target the efficiency of space heating have the highest potential to reduce Victoria’s gas-related emissions.⁴⁸
- c. improving building insulation (more than 10 PJ gas reduction)
Research from New Zealand has linked retrofitting home insulation with a reduction in hospital admission rates associated with cold weather.⁴⁹
- d. replacing gas water heaters with heat pumps (10 PJ gas reduction)

The consultants commissioned by Environment Victoria suggest the Victorian Government could adopt pro-electrification and efficiency measures such as:

- a. Removing government support for fuel switching from electric to gas through amending the Victorian Energy Upgrades activities;
- b. Creating new incentives through the Victorian Energy Upgrades program to drive the replacement of ducted gas heating systems with reverse-cycle airconditioners;
- c. Creating new incentives through the Victorian Energy Upgrades program to drive the replacement of ducted gas heating systems with reverse-cycle airconditioners;
- d. Including heat pumps as acceptable solar hot water systems through amending the Victorian Building Authority Minimum 6–star energy provisions;

⁴⁶ <https://www.theguardian.com/australia-news/2022/mar/29/south-east-australia-risks-temporary-gas-shortages-by-2023-winter-energy-review-warns>

⁴⁷ The analysis we commissioned was performed by Northmore Gordon – energy consultants with expertise in energy efficiency and electrification.

The analysis Environment Victoria commissioned was performed by Northmore Gordon – energy consultants with expertise in energy efficiency and electrification.

⁴⁸ Sustainability Victoria (2019)) as cited by Towards 2050: Gas infrastructure in a zero emissions economy, Interim report p.18

⁴⁹ Fyfe C et al (2020) as cited by Towards 2050: Gas infrastructure in a zero emissions economy, Interim report p.18

- e. Providing Victorian government backing and joint funding to the ARENA renewable process heat program;
- f. Encouraging Victorians who own reverse cycle-air conditions to use them for space heating;
- g. Establishing incentives for replacing gas boilers in commercial buildings.

3. Gas connections in community and healthcare.

Banning new domestic gas connections is a step the Victorian Government could take tomorrow to reduce Victoria's dependence on gas.

Supporting gas free healthcare builds is another.

In Summary

ANMF (Vic Branch) welcomes the provision of 100% renewable energy to public hospitals through the Victorian Renewable Energy Targets (VRET2) auction. The demands that climate change has placed on humanity and health are relentless. So must our pursuit of deliberate and sustained just transition be. When prioritised and provisioned for, it is possible for new healthcare builds to be gas free. The new South Australian Women's and Children's Hospital in Adelaide will be the first all-electric hospital in Australia, and will not be connected to the state's gas infrastructure. An expansion of the current Canberra Hospital will also be all-electric. We need to exceed this ambition with a target that all new healthcare builds in Victoria will be built for the future, risk assessed and gas free.

Local ANMF (Vic Branch) members in Geelong have sent a strong message- instead of relying on old technologies, there needs to be urgent focus on implementing and enhancing existing opportunities such as electrification using renewable electricity not gas.