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GAS SUBSTITUTION IN VICTORIA – POLICY SOLUTIONS FOR GSR2.0

INTRODUCTION

When released in July 2022, the Gas Substitution Roadmap (GSR) took the important step of communicating the Andrews government's intention to phase out the use of methane gas in Victoria. We appreciate that there are political complexities in shifting away from a fossil fuel that has historically been cheap and readily available in homes, businesses and industries. And we acknowledge the GSR outlined immediate steps to phase out our reliance on gas with a view to increase its ambition in subsequent iterations, the first of which is due in late-2023 and that we're calling GSR 2.0.

But phasing out polluting fossil fuels is an urgent priority. Communities in Victoria and across the globe are experiencing the escalating impacts of climate change damage caused by burning fossil fuels.[1] If the Victorian government doesn't begin to reduce gas emissions now, methane gas could be responsible for one-third of Victoria's emissions by 2035, and the state's emissions reduction target of 75-80% by 2035 won't be met.[2]

In addition to the climate crisis, Victorians are gripped in a cost-of-living vice. Gas bills alone contribute substantially to household and business financial pressures, and as the state that consumes the largest amount of methane gas – mostly in homes and small business[3] - we are especially vulnerable to the relentless rise in global gas prices.

The solution to Victoria's reliance on methane gas is quite simple: electrification, powered by clean, renewable energy. The Victorian Government's July 2023 announcement that it will end gas connections for new residential and public buildings from 1 January 2024 is a step in the right direction.[4] But the problem needs addressing with urgency. Victoria needs a comprehensive plan that outlines how we will rapidly transition away from gas within a decade.

The people who are feeling the greatest financial pressure from gas prices also face the biggest barriers to the solution. People who can't install solar and batteries, replace gas appliances with efficient electric ones, or increase household efficiency either because they can't afford it or don't own their home will be exposed to increasing cost of living pressure as more households who can afford to switch their appliances and disconnect from gas.

GSR 2.0 must send a clear signal to the community, workers and investors that everything in Victoria that can be electrified will be electrified, and that necessary support will be available to those who cannot afford the upfront costs. This will ensure we achieve our climate and renewable energy targets, are compliant with the Paris Agreement, and that everyone can experience the benefits of electrification equitably.

For more information please contact us at
admin@environmentvictoria.org.au | (03) 9341 8100

OVERVIEW OF RECOMMENDATIONS FOR GSR 2.0

GSR 2.0 must:

1. **Include a plan to get Victoria off gas which is in consistent with limiting global heating to 1.5°. The plan must:**
    a. Include specific goals and timelines for reducing gas use across the state to ensure all households, government buildings, and small businesses are electrified within a decade.
    b. outline a framework to retrofit 2 million plus homes connected to gas with efficient electric appliances.
    c. Update the Victorian Energy Upgrade Program to include additional energy efficiency opportunities and incentives to switch to electric appliances.

2. **Outline how the Victorian government will not make the gas problem worse by:**
    a. Expanding the restriction on new residential gas connections to commercial users.
    b. Phasing out the sale of gas appliances by 2025.
    c. Stopping further methane gas expansion, drilling, extraction, and exploration in Victoria.

3. **Outline how the Victorian government will lead by example and rapidly electrify government assets, specifically:**
    a. Social housing;
    b. Government buildings; and
    c. Schools and hospitals.

4. **Make electrification easy and affordable by providing extensive government incentives and other support:**
    a. to make electrification possible for all households and small businesses whether they rent or own, and regardless of income, ethnicity and location; and
    b. to develop the necessary workforce and local manufacturing supply chain required for rapid electrification.

5. **Outline a broad public education campaign to:**
    a. communicate the problems with methane gas and why rapid electrification is necessary and beneficial; and
    b. connect Victorians with resources and information on the necessity and benefits of electrification that is accessible to diverse range communities including multicultural communities and people on low-incomes.

DETAIL OF RECOMMENDATIONS FOR GSR2.0

1. INCLUDE A PLAN TO GET OFF GAS.

GSR2.0 should set out a timeline for Victorian homes, schools, businesses, hospitals and all government buildings to be electrified, and identify clear goals to reach this target.

Community, business, manufacturers, workers and renewable energy investors require certainty to plan for state-wide electrification. Our view is that there are three immediate components to this plan, outlined below.

a. Include specific goals and timelines for reducing gas use across the state to ensure all households, government buildings, and small businesses are electrified within a decade.

Several countries have introduced bans on gas connections in new buildings,[5] introduced dates to stop both the sale and installation of gas appliances,[6] or committed to replace all existing gas appliances.[7]

Given the rate at which Victoria is running out of a domestic source of methane gas (see section 2 below), the Government's commitment to achieving 95% renewable energy and 75-80% greenhouse emissions reduction by 2035, and the cost-of-living pressures from rising gas prices, we recommend that Victoria's gas substitution timeframe is more ambitious. We need to electrify our state within a decade. This could include a staged phase-out based on location (perhaps by electorate) in which the gas distribution infrastructure is dismantled at the same rate as electrification is achieved.

To ensure transparency and accountability, GSR2.0 should require the Victorian government to report annually on its progress to phase out gas. At a minimum, these annual reports should include information such as the number of electric appliances sold and installed, number of disconnections from the gas network, number of jobs created, progress on community education and outreach, and greenhouse gas emissions reductions from replacing gas appliances.

b. Outline a framework to retrofit all homes connected to gas with efficient electric appliances.

GSR2.0 should include a framework to achieve rapid home electrification. The Victorian public must have a clear sense of when and how they will be expected to switch, or in the case of non-homeowners, when they can expect the switch to occur. And they must be assured that there is a standard of appliances to meet appropriate efficiency standards. To provide this assurance, we recommend that the Essential

Services Commission prepare regulations and guidelines on minimum efficiency standards for electric appliances.

This framework could include:

- an audit of the number of gas appliances in all Victorian homes by the end of 2024;
- a two-fold approach to ensure low-income households, renters and people living in social and community housing can receive the benefits of electrification at the same time as those who can afford it and have access to it;
- measures to protect consumers from the cost of gas phase out, especially the gas price death-spiral; and
- a process to meet the needs of regional and rural households reliant on LPG rather than the gas distribution network.

c. Update the Victorian Energy Upgrade Program to include additional energy efficiency opportunities and incentives to switch to electric appliances.

The Victorian Energy Upgrade (VEU) program should be expanded to offer a range of additional options for homes and businesses to switch to efficient electric appliances. Expanded programs could include:

- **A targeted payment system and an affordable range of financial products.** Currently VEU requires people and businesses to apply for a rebate after they have purchased an appliance or service eligible for a rebate. We know that one of the biggest barriers for people to switch appliances is the upfront cost, so a range of financial packages and services should be available to support appliance switching and energy efficiency upgrades, including interest free loans and for landlords, potential tax incentives. These financial incentives could be supported by the federal government through its Household Energy Upgrades fund.[8]
- **Mixed product and service packages.** Offer rebates for multiple appliances and home efficiency services, with similar payment options as above.

2. OUTLINE HOW THE VICTORIAN GOVERNMENT WILL NOT MAKE THE GAS PROBLEM WORSE.

A plan to phase out methane gas use in Victoria must be accompanied with a commitment to not make the problem worse.

There is almost no point having the GSR if Victoria continues to permit new gas exploration and extraction, allow new connections for commercial users, and permit the sale of gas appliances. Rapid electrification requires the prevention of new gas entering the Victorian energy market. Victoria must avoid a paradoxical situation whereby it succeeds in phasing out household and commercial gas use but remains a gas producer and continues to contribute to the climate crisis.

a. Expand the restriction on new residential gas connections to commercial users.

Methane gas is responsible for 17% of Victoria's emissions.[9]

While biogas and green hydrogen might help industrial users cut emissions, the overwhelming evidence points to electrification as being the most viable and affordable option for households. This point was affirmed by the Independent Expert panel in their 2035 emission reduction target advice.[10]

The Victorian government's recent announcement to stop new gas connections for housing and public buildings is a step in the right direction. But it should be extended to small-medium commercial users, as for the majority of these users there is an efficient electric appliance alternative to gas. Failure to ban new gas connections for new commercial users, including those in new estates in which new residential premises are banned from connecting to gas, exposes them to the costs associated with construction and maintenance of the gas network.

We have taken big steps in the right direction over the last couple of years, but the reality is that until Victoria stops *all* new gas connections, Victorian gas policy will be missing a key piece of the puzzle.

Further, the gas industry has been raising the alarm about a potential gas shortfall for years. Preventing all new connections would improve energy security by ensuring that gas demand will decrease, radically changing demand and supply forecasts.[11] Demand savings from disconnecting household and small-medium commercial users from gas will ensure that gas is available for large industrial businesses in the lead-up to their energy transition to renewable gasses such as hydrogen.

There are significant community concerns regarding who will bear the cost of maintaining and decommissioning the gas network through the energy transition. Expanding the network, or extending its lifetime with new connections, will only benefit the network owners at the expense of Victorian gas consumers.

b. Phase out the sale of gas appliances by 2025.

One of the clearest ways GSR 2.0 can signal that Victoria is serious about getting off gas is to put an end date on the availability of gas appliances. This will help residential and commercial construction companies, homes, businesses, landlords and housing suppliers to plan to replace gas appliances with electric alternatives once those gas appliances reach their end of life, and signal to electric appliance retailers, manufacturers and importers that there will be increased demand for electric appliances from 2025

onwards.[12] Heat-pumps for water and space heating should become the standard in Victoria for all new builds by 2025. For a phase out of the sale of gas appliances by 2025 to be successful it could include:

- Economic incentives for households to reduce the purchase and installation cost of efficient electric appliances.
- Regulation and guidelines from the Essential Service Commission on best practice installation and suitably efficient appliance models eligible generally and including for the VEU rebate.
- A mixture of state and federal financial supports for local manufacturers to build heat pumps in Victoria.
- Financial support for local gas appliance manufacturers (including those in supply chain) to reskill where required and transition to efficient electric appliance product and component manufacturing (see more on manufacturing below).
- Specific measures to address the needs of rural and regional households reliant on LPG.
- Explicit ban on hydrogen or gas blends entering gas pipelines.

c. Stop further methane gas expansion, drilling, extraction, and exploration in Victoria.

Amidst a climate and cost of living crisis, it is increasingly clear that no one, beyond fossil fuel investors and distribution companies, will benefit from approving new methane gas projects in Victoria.

Methane is responsible for around 30% of global warming,[13] and is the second largest driver of global heating behind carbon dioxide.

According to the International Energy Agency (IEA), developed nations contributing their fair share to limit global heating means they must end oil and gas production by 2034, and not open any new gas fields from 2021.[14] In contrast to the IEA's warning, global gas production is expected to grow by 0.9% from 2020 to 2035 and peak by 2037.[15]

Gas fields have an average life-span of 15 to 30 years, with large deposits such as Bass Strait lasting 50 years or more. This means opening new gas fields will lock in methane emissions for decades.[16] Even if gas extracted in Victoria is exported and made available on the global market, methane emissions from using that gas contributes to both Victoria's actual greenhouse gas pollution reduction efforts and to making the climate crisis worse. This is not something we can afford to do.

Approving gas exploration and extraction licences can have negative implications beyond damaging our climate. Both on and offshore gas fields can affect local ecosystems, groundwater catchments and local communities. The Otways is a prime example. In 2021 the Victorian Government approved the extraction of gas near the Twelve Apostles, one of Victoria's natural wonders, and within the boundaries of Port Campbell National Park. Projects like this threaten a National Park, a place for protecting biodiversity rather than fossil fuel interests, and a tourism icon.

Further, given its status as a national climate leader there is a clear role for Victoria to play in advocating that other states and territories shouldn't establish new, or expand existing, gas extraction projects. Projects such as Woodside's Burrup Hub in Western Australia, proposed shale gas extraction in the Northern Territory's Beetaloo Basin, and Santos' Narrabri gas project in the Liverpool Plains in NSW are disastrous for their climate, social, and environmental impacts. As the only state to constitutionally enshrine a ban on fracking and introduce a plan to phase out gas Victoria can strongly encourage other states and territories to follow suit.

Finally, companies like AGL and Viva Energy have spruiked gas import terminals as a 'solution' when in reality, these projects stand to benefit only their owners. Imported liquid methane gas is more expensive than (the already expensive) methane gas from Victorian gas fields. And it's more polluting too due to the energy needed for its liquefaction, transport and regassification.

3. OUTLINE HOW THE VICTORIAN GOVERNMENT WILL LEAD BY EXAMPLE.

GSR 2.0 must include a commitment from the Victorian government that it will lead state-wide electrification by example with a plan to electrify all government buildings, not just new ones.

The Victorian Government should establish regulations to phase out gas appliances from existing schools and childcare centres, government Department and administrative buildings, hospitals and social housing. By being an early adopter, the government can support the first stages of Victoria's gas transition, signal the demand for efficient electric appliances, and contribute to driving down their cost.

Electrification and energy efficiency upgrades for social housing residents is another important priority which could be jointly funded with the federal government.

Schools and childcare centres: According to the Building Quality Standards Handbook, the Victorian School Building Authority (VSBA) has the *intention* to phase out reliance on gas in schools,[17] but schools can still choose to replace old gas heaters. For a successful transition away from gas we need a clear plan for all Victorian public schools and childcare centres to switch out gas appliances for efficient electric appliances within a decade.

Government buildings: Since 2009 the Department of Transport of Planning has run the 'Greener Government Buildings' program.[18] This program aims to increase energy efficiency and reduce the greenhouse gas emissions from

government buildings. It also includes solar panels and heating and cooling upgrades but lacks clear directives from the GSR to ensure that government buildings become all-electric within a decade.

Hospitals: The guidelines for sustainability in health care capital works show a strong commitment to electrification in the health sector.[19] There are several hospitals currently proposed by the Victorian Government for construction or expansion.[20] Where possible, they should not be connected to gas and should be electrified.

Social housing: Housing Vic has launched the Energy Efficiency in Social Housing Program to support social housing renters. This has received a recent injection of $92M in state and federal funding for efficient electric appliances and household efficiency upgrades.[21] However there is no information or guidance yet on whether gas appliances can still be installed in social housing beyond this program,[22] or when and how social housing will be disconnected from gas entirely.

4. MAKE ELECTRIFICATION EASY AND AFFORDABLE BY PROVIDING EXTENSIVE GOVERNMENT INCENTIVES AND OTHER SUPPORTS.

Everybody must be able to enjoy the benefits of electrification.

There is a real danger that some people in the community will be left behind as gas is phased out. People who face significant barriers to electrification, because of their housing tenure and/or because they can't afford the upfront costs, are most at risk of being exposed to higher energy bills as demand for gas drops and will suffer the most for it. There are ways that GSR2.0 could ensure that no one will be left behind or face significant additions to their cost of living or cost of doing business.

a. Make electrification possible so *all* households can electrify regardless of income and housing tenure.

Introduce targeted financial programs to help *all* households switch to electric appliances powered by renewable energy.

One of the significant barriers to electrification is the upfront cost associated with switching appliances. Current incentives under the VEU program and Solar Victoria are inaccessible for people who cannot afford the upfront costs associated with switching appliances and increasing their home's efficiency. Landlords also present a significant barrier for renters (public and private) to benefit from electrification and renewable energy-powered dwellings. Without targeted financial support for low-income owner-occupiers, and incentives to increase landlord uptake of electric appliances and making renewable energy accessible for their tenants, many people will be forced to pay increasing energy bills through no fault of their own.

Introduce mandatory minimum energy efficiency and electric appliance standards for all rented dwellings under the Residential Tenancies Act

The NatHERs rating for Victorian households is, on average, 2.62.[23] This means that most Victorians shiver through winter and swelter in summer. Anyone who does not own their home is at the mercy of landlords to improve energy efficiency standards. The Victorian government must follow through on its commitment to include minimum rental standards for household efficiency. The GSR2.0 is an appropriate time to launch that commitment. It must also introduce mandatory minimum electric appliance standards under the *Residential Tenancies Act 1997* (Vic) for *all* rented domiciles as follows.

- Mandatory minimum energy efficiency standards of at least 6 stars.[24] Private and public landlords should be required to ensure their properties meet minimum efficiency standards for insulation, window glazing and draught-proofing at the very least. These standards should be introduced by mid-2024, commence by the end of 2024 and aim for all properties to meet an energy efficiency standard of at least 6 stars by the end of 2030. Landlords should be able to take advantage of incentives under VEU to replace appliances but should cover the cost of home energy rating assessments.[25]
- Mandatory minimum electric appliance standards. When gas hot water, space heating and cooking appliances reach end-of-life they must be replaced with efficient electric appliances of a minimum star rating determined by the Electricity Services Commission. Heating and cooling appliances must be replaced by end-of 2024 at the latest. The option for landlords to install a gas space heater under the current minimum standard for heating must be immediately removed.[26]

Finally, renter protections must be introduced to protect tenants from rent increases because of landlords upgrading their rental properties.

b. Develop the necessary workforce and local manufacturing supply chain required for rapid electrification.

Recent incentives to help attract a renewable energy workforce – including training and reskilling – are helpful. However, the scale required to electrify houses requires significant urgency to ensure we have enough workers to make and install the appliances we need.

To develop the necessary workforce and local manufacturing supply chain required for rapid electrification GSR2.0 could include:

- **A process to identify the rate at which appliances must be switched out and increase training and reskilling opportunities to achieve this rate.** We know that there is somewhere between 4 and 6 million gas appliances installed in Victorian homes and businesses. We also know there are thousands of plumbers and other tradespeople who will need upskilling to be able to install electric appliances. GSR 2.0 must outline a clear plan to determine the rate at which electrification needs to happen and the number of people required to do the work.
- **Increased funding for low-carbon manufacturing.** The Victorian Industry Investment Fund currently allocates $19.9 million out of $120 million to support manufacturers to 'build their capacity, invest in renewable energy and low-carbon manufacturing and help support workers transition to advanced manufacturing jobs'.[27] This is nowhere near enough. The Victorian government must signal to the manufacturing community that it is serious about state-wide electrification by increasing the amount of financial support and make it ongoing. This could be supported by funding commitment from the federal government.
- **Support gas appliance and supply chain manufactures to reskill and transition to producing electric appliances and parts.** To ensure no-one is left behind in the electrification process, Victorian manufacturers who make gas appliances and components must be supported to transition their skills to make electric alternatives. Financial and training incentives must be developed to achieve this including through skills and training programs already in place (e.g. free TAFE).

5. EDUCATE THE PUBLIC

People generally understand how coal-burning power stations contribute to climate change. But given gas has historically been branded as 'natural' – people are far less familiar with the contribution of methane gas to climate change. And whilst people are experiencing bill stress because of increased gas prices, there's still a lot of education required to help people understand the benefit of switching to electric appliances in their homes.

The Victorian government must initiate a broad-reaching community education campaign to help people understand why it has introduced the GSR and why Victoria needs to switch from gas to electric appliances. This campaign must be tailored appropriately for a range of audiences, in partnership with sources of information that communities trust, to deliver the information people need to support the government's intention to phase out gas.

In short, GSR2.0 must include a plan to:

- **Initiate a state-wide community education campaign** that clearly explains the climate risks of extracting and burning fossil gas.
- **Partner with trusted community sources to deliver community education programs** to engage culturally and linguistically diverse communities, disabled community members, neurodiverse community members, and people impacted by low literacy and numeracy.
- **Include, where possible, people who face barriers to electrification in the planning process.** As reported by the Brotherhood of St Laurence,[28] communities that face the biggest barriers to electrification should be included in the planning process. In developing its community engagement plan and timeline to phase gas out of homes, the Victorian government should work with local, trusted community bodies such as Neighbourhood Houses, councils and community housing bodies to maximise engagement.[29]

ENDNOTES

1 Wood, T, Reeve, A., and Suckling, E, *Getting off Gas: why, how and who should pay?* Gratton Institute (June 2023) (Gratton Report) p 3. Available at: https://grattan.edu.au/wp-content/uploads/2023/06/Getting-off-gas-why-how-and-who-should-pay.pdf.

2 Environment Victoria, *Gas sector emissions and Victoria's new 2035 climate target* (March 2023). Available at: https://environmentvictoria.org.au/wp-content/uploads/2023/02/Gas-sector-emissions-and-2035-climate-targets-FINAL-3.pdf.

3 Gratton Report p 7.

4 See: https://www.premier.vic.gov.au/new-victorian-homes-go-all-electric-2024/.

5 Denmark (2013), Netherlands (2018), France (2022, collective housing in 2025), Austria, Luxembourg, Flandes (Belgium), Slovenia (2023), Republic of Ireland, and UK (2025). New York State has a ban set for end-of 2023 for buildings under 7 stories and 2027 for anything over, and includes exemptions for areas where the grid cannot handle the load. See: https://www.nysenate.gov/legislation/bills/2021/S6843.

6 For example California will phase out the sale of new gas heaters by 2030 (see: https://www.npr.org/2022/09/23/1124511549/california-plans-to-phase-out-new-gas-heaters-by-2030). The Netherlands will prevent gas appliances being available by 2026, and are offering a 30% rebate on the purchase of a new appliances (see: https://business.gov.nl/amendment/hybrid-heat-pump-mandatory/).

7 Denmark will replace 50% of gas heaters with heat district by 2028, and the rest with heat pumps by 2029. Finland has committed to replace all household gas appliances by 2030. The Netherlands intends to have all gas appliances replaced by 2050.

8 See: https://www.cefc.com.au/where-we-invest/special-investment-programs/household-energy-upgrades-fund/.

9 See: https://www.energy.vic.gov.au/renewable-energy/victorias-gas-substitution-roadmap.

10 See: https://engage.vic.gov.au/download/document/31559

11 See: https://environmentvictoria.org.au/2020/06/03/the-gas-jig-is-up-heres-how-victoria-can-get-off-gas/

12 Gratton Report, p 25.

13 International Energy Agency, Global Methane Tracker 2023. Available at: https://www.iea.org/reports/global-methane-tracker-2023/overview.

14 International Energy Agency, *Net Zero by 2050: A Roadmap for the Global Energy Sector* (October 2021). Available at. https://iea.blob.core.windows.net/assets/deebef5d-0c34-4539-9d0c-10b13d840027/NetZeroby2050-ARoadmapfortheGlobalEnergySector_CORR.pdf

15 McKinsey & Company, *Global gas outlook to 2050* (February 2021). Available at: https://www.mckinsey.com/industries/oil-and-gas/our-insights/global-gas-outlook-to-2050

16 Infrastructure Victoria, *Towards 2050: Gas infrastructure in a net zero economy* (December 2021). Available at: https://www.infrastructurevictoria.com.au/wp-content/uploads/2022/02/Towards-2050-Gas-infrastructure-in-a-net-zero-emissions-economy_FINAL-REPORT.pdf

17 See: https://www.education.vic.gov.au/Documents/school/principals/infrastructure/vsba-building-quality-handbook.pdf

18 See: https://www.dtf.vic.gov.au/funds-programs-and-policies/greener-government-buildings

19 Victorian Health Building Authority, Guidelines for sustainability in health and care capital works (undated). Available at: https://www.vhba.vic.gov.au/sites/default/files/2021-10/Sustainability-guidelines-for-capital-works-VHBA-Revised-October-2021.pdf

20 See: https://www.vhba.vic.gov.au/health.

21 See: https://minister.dcceew.gov.au/mcallister/media-releases/joint-media-release-cheaper-cleaner-energy-more-victorians.

22 See: https://www.housing.vic.gov.au/energy-efficiency-social-housing

23 See: https://assets.sustainability.vic.gov.au/susvic/Report-Energy-Energy-Efficiency-Upgrade-Potential-of-Existing-Victorian-Houses-Sep-2016.pdf p 16.

24 Using NatHERS criteria. See: https://www.nathers.gov.au.

25 Home energy rating assessments are currently available as a rebate under VEU. See: https://www.esc.vic.gov.au/victorian-energy-upgrades-program/about-victorian-energy-upgrades-program/overview-veu-activities.

26 As currently expressed on the Consumer Affairs website: https://www.consumer.vic.gov.au/housing/renting/repairs-alterations-safety-and-pets/minimum-standards/minimum-standards-for-rental-properties.

27 See: https://business.vic.gov.au/grants-and-programs/low-carbon-manufacturing-grant-program

28 Sangeetha Chandrashkeran, Julia de Bruyn, Davind Bryant and Damian Sullivan, *Enabling Electrification: Addressing the barriers to moving off gas faced by lower-income households*, published by Melbourne University and Brotherhood of St Laurence (2023)(BSL Report). Available at: https://www.bsl.org.au/research/publications/enabling-electrification/

29 BSL Report p 30.