TOWARDS 2050: GAS INFRASTRUCTURE IN A ZERO EMISSIONS ECONOMY – INTERIM REPORT

CONSULTATION RESPONSE

SAVE WESTERNPORT (SWP)

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Introduction

Save Westernport thanks Infrastructure Victoria for the opportunity to make a submission on this critical issue.

Save Westernport (SWP) is a not for profit community organisation set up to fight the AGL proposal at Crib Point and to protect the waters and surrounds of Westernport Bay. (Further information - Attachment A)

The interim Report by Infrastructure Victoria is an important contribution to the policy work on meeting Victoria's emissions targets and moving away from gas.

As the Infrastructure Interim Report makes clear this piece of work does not stand alone; it both informs and complements the other recent paper on gas substitution/decarbonisation by DWELP.

As SWP made a quite detailed response to that Consultation Paper we have included it as part of our response to your Interim Report (Attachment A).

Quite clearly and for good reason there is considerable overlap in both papers with Infrastructure Victoria focusing more specifically on the role (potentially) of existing gas infrastructure in a net 0 economy.

Whilst SWP recognises the advantages of having multiple sources of advice in developing policy approaches on gas and achieving Victoria's interim and net 0 emissions targets we do make the point that this poses a significant burden on a voluntary organisation like ours in responding to two different consultations.

We think that if the two departments had worked up a single paper that covered the issues (given the considerable overlap) this would have been preferable.

We hope that a whole of government approach will be the next phase. Your Interim Report states that a final report will be going to the Treasure no later

than December this year and the findings will help inform the DELWP Roadmap. We take this to mean that Infrastructure Victoria's Report will feed into that process and it is the Roadmap that will set the policy agenda.

In this regard we note the recent consultation by Jobs and Precincts around opening up onshore gas exploration and the recent announcement by the Minister for the Environment approving a production license for Beach Energy in offshore gas fields near the Twelve Apostles.

This is such a major policy contradiction with the aims and objectives of this Interim Report and DWELP"s Roadmap. A whole of government approach must address both exploration/production controls and alternative energy sources.

As the International Energy Agency (IEA) has recently made clear in its recent Report, *Net 0 by 2050 – A Roadmap for the Global Energy Sector,* the world must cease approving all new gas and oil fields now. Victoria must take this same policy step.

This is no longer an option but a critical necessity.

Since both this Interim Report and the Gas Substitution Roadmap Consultation Paper were written further evidence of the dire consequences of methane gas on our climate and its contribution to climate change have been further demonstrated.

The IPCC Reports on Climate Change released on August 7 provide the most comprehensive statement ever written about the state of climate change and its impacts for humanity and all other species.

Obviously, Victorian government agencies will be examining the IPCC Reports in detail but for the purposes of this submission to Infrastructure Victoria, Save Westernport refers to the overview report, *Climate Change 2021 the Physical Science Basis- A Summary for Policy Makers (IPCC AR6WG1)***.**

As this Report makes clear, unless deep reductions in carbon dioxide and other greenhouse gases are made in the next decades then global warming of 1.5-2.0 degrees centigrade will be exceeded by 2050. The report emphasises the role of methane in contributing to global warming and calls for strong, rapid and sustained reductions in methane gas (p41).

We draw your attention to Figure SPM 2 on p9 which shows the significance of methane as a driver of climate change in the last decade (2010-19). By 2019 concentrations of methane were higher than any time in the last 800,000 years. The fundamental cause of this rise in methane emissions is gas extraction and applications.

In accord with the IPCC's research and recommendation we have to start moving off gas immediately and sustain that in the next decades.

Key Comments on the Interim Report

Gas and emissions in **Victoria**

As this Interim Report identifies, (also DELWP Roadmap), Victoria has for many decades relied on gas from Bass Strait as a source of energy, especially for home heating and hotwater as well as cooking. Gas was sold to the Victorian public as a cheap, clean and natural source of energy. The reality, as evidenced by the science and economics, is that this story is not only fallacious it is now very dangerous.

Given that domestic use of gas is high in Victoria for gas heating/hot water the electrification of these uses (through renewable generated electricity) seems the most obvious starting point for moving away from gas and reducing emissions. We refer to the points made in our response to DELWP on these matters, including the need for the Victorian Government to accelerate incentives away from these uses of gas.

As your Interim Report makes clear, gas is also no longer cheap. Renewable energy is now the cheapest source of energy we have and so moving to electrification from renewables also benefits consumers.

Given the enormity of the task and the extremely short timeframe we have to reduce emissions and to slow and, hopefully, reverse human-based climate change (IPCC), SWP strongly supports policy initiatives based on an approach of electrification.

The reality is some of the other scenarios in your paper are so far from being realized that this seems the most obvious and cost effective policy approach to tackle climate change now and meet Victoria's interim and net 0 targets.

Gas infrastructure

As your Report points out (p16) much of Victoria's gas infrastructure is ageing and would need substantial and costly refurbishment just to maintain the gas networks.

SWP strongly believes any investment in retaining this infrastructure would be a white elephant and waste of money including modifications for hydrogen. The age of this infrastructure is itself a signal to move away from gas.

The cost of modifying the gas pipelines for hydrogen replacement are prohibitive and the potential risks as identified are another reason not to travel down this path at least in the sort term. Focus on the most cots effective high impacting short and immediate term strategies.

Education of the community

SWP strongly supports the need for widespread government sponsored community education on gas and its impacts on climate change as part of strategy. We note that you have raised this as an important issue (an omission in the DELWP Consultation Paper).

As your Report notes, the majority of people see climate change as a major issue but their understanding of the contributions of gas is perhaps not so clear and this needs to be addressed. As people better understand the role of gas as major contributor of climate change, so too will their readiness to move away from gas. As you point out changing consumer behaviors around gas, energy efficiencies and electrification will be pivotal.

Role of government, legislation and planning

Your paper rightly points out the pivotal role of government in how we approach this issue and the complexity of the legislative arrangements governing the gas industry in Australia.

There is also the question of very differing policy approaches nationally with Victoria and other States and Territories. We totally agree with your position (as set out in 5.3.2) that a clear policy direction is needed to phase out gas and shift to electricity.

We also support the need for a complete overhaul of all legislation and planning to be consistent with both interim and net 0 targets. In this respect current planning arrangements which favors gas must be immediately addressed (p39). A clear policy direction must be to cease all new gas connections to new suburbs/housing developments.

The proposed Scenarios to Net 0

The four scenarios are presented as options using different technology mixes and variables and 'all options should be open - it is too early to pick a winner.' (p39) *The scenarios illustrate the performance of these key variables but are not intended to be definitive or reflect an optimal scenario. (p27)*

The interim Report notes that the scenarios were made before Victoria's interim targets were set and that they will need to be revisited. We agree this is critical.

The final Report and DELWP Roadmap needs to set out clear cut policy and legislative directions which address the urgent actions needed now to 2030. It should further identify other preferred options that help drive emissions to net 0 by 2050.

In this respect we think a staged approach is most effective; one that focuses on the short term scenario A type technologies with its emphasis on renewables electrification/batteries combined with energy efficiencies and which lays out a pathway to very little gas and no CCS.

This is the direction we must keep moving towards in the immediate future - these technologies are mature and readily available, they are the cheapest form of energy and the most advanced of the technologies in the proposed scenarios. All the other technologies in the scenarios are not advanced on a mass scale (except retention of some gas as in Scenario B) and we simply don't have time to wait until these technologies are readily and cheaply available.

If such a staged approach were proposed, SWP thinks a Scenario A model must be the predominant policy approach both now and to 2050. This could be complemented by green hydrogen if large scale production becomes feasible and cost effective. Green hydrogen is neither at the moment and it seems to us that using renewables based electricity to produce another green energy source as somewhat counter productive, especially given the volumes of green power that would be needed. Surely using 'green' electricity for energy use rather than production of another source of energy makes the most sense (at least at this point in time).

SWP does not support any approach/scenario that continues the use of fossil fuels to produce hydrogen with or without sequestration of emissions (CCS). Whether hydrogen is produced using gas (blue) or coal (brown) it releases significant Co2 in the process. No Carbon capture storage solution exists that traps these emissions.

We cannot see the value of putting government money into CCS projects - such projects are a smokescreen to prop up the fossil fuel industry. Moreover they do not currently work. This is wasted use of dollars that could be better used to ensure the grid is effective based on renewables electricity.

We strongly oppose the HESC project on these grounds and the potential environmental impacts on Westernport Bay should this project proceed beyond the pilot.

Focus on what works – electrification using renewables.

Thank you

Attachment A: Help build Victoria's Gas Substitution Roadmap

Response to the Consultation Paper
Save Westernport Inc (SWP)

Introduction

About SWP

Save Westernport (SWP) is a not for profit community organisation set up to:

- protect Westernport Bay from projects and industrial processes that threaten its environment and biodiversity
- support initiatives that will improve and enhance the environment of our region.

The catalyst for SWP's formation was the proposed gas import terminal at Crib Point and pipeline to Pakenham by AGL/APA . This proposal was the subject of a massive four year campaign of opposition by our community and beyond. It involved an extensive EES with the highest participation ever in an EES by members of the community and culminated in the Minister for Planning's Assessment on March 30, 2021 to reject the proposed project on environmental grounds.

SWP played a pivotal role in this campaign helping to build massive community opposition to the proposed FSRU and pipeline. In the course of this process, we became involved in the wider issues surrounding the use of gas as a fossil fuel and its impacts on emissions and climate change. The knowledge we gained about the adverse impacts of gas on our environment has led to our engagement in this particular community consultation on gas substitution.

Introductory comments

*SWP strongly supports this Victorian government initiative t*o start the process of gas substitution/decarbonisation. We commend the consultation paper which is well written and provides clear options and issues/challenges around the ways forward. We appreciate the opportunity to take part in this process.

As the Consultation paper sets out, this initiative is essential if Victoria is to meet its emissions targets, as defined earlier this year.

SWP strongly supports the identified targets.

The interim targets are both necessary and crucial if we are to reach Net 0 by 2050. Net reductions of one third in four years and 50% in 9 years mean we must take urgent actions now to address our core emission sources - gas and brown coal.

SWP also recognises that this consultation process is not standalone; it forms part of a complementary suite of Victorian policy initiatives around energy efficiency and renewables as the way forward for our energy future – against the backdrop of our climate change strategy.

This roadmap on gas substitution when finalised must set a clear agenda that is understood and supported by our population.

To this end, we make some broader comments about the paper and the initiative.

If we are to move away from gas in this State, as we must, then it is imperative that we confront two key obstacles. Both need to be acknowledged and addressed.

A divided political context

The first of these is that this substitution initiative, (along with our clear cut emissions targets), stands in stark contradiction to the Federal Government's absurd gas led recovery.

The so-called gas led recovery is nothing but spin but it is powerful spin in which the people of this country are being told how important gas is to our economic future and as a transition energy source. These messages will need to be effectively countered here in Victoria to gain widespread support for this proposed policy of gas substitution.

It is imperative that the Victorian government is able to effectively address this political and ideological divide and explain to Victorians why we need to look at alternatives to gas. These are complex policy differences that will need careful and clear cut messaging and communications.

Education is the key

This leads to the second broader aspect of such a policy shift: that is, the need for a very powerful and widespread education campaign in the community about what gas actually is, the emissions it produces and its impact on climate change.

For many of us in SWP, there was little understanding of the gas industry until we did the research for the EES.

Many people who have lived with gas throughout their lives do not have a good understanding of gas as a destructive fossil fuel and a major source of emissions. In contrast, most people now understand the role of coal in climate change. The gas industry has been very successful in making us believe that gas is 'natural and clean' and a cheap source of energy and that it provides a transition source of energy to a renewables future. Nothing could be further from the truth.

SWP therefore sees a large-scale education campaign as necessary. This campaign must explain what gas is - methane – together with the emissions it produces and its impacts on emissions over the short term (86 times more potent than CO_2). Raising awareness of these facts, alongside other matters such as the high cost of gas to the consumer and limited future generation sources from Victoria, will be essential to gaining support for substitution initiatives.

Educating people on the benefits of substitution options will also be imperative. People won't buy in unless they understand the rationale.

Continuity in policy settings across government

Finally, our comments at this broader level move to the need for continuity in Victoria's policy settings. Just as this Consultation Paper builds on other policies and strategies around renewables, climate change and emissions, it is critical that other policies and decisions of the Victorian government are not at odds with gas substitution/decarbonisation initiatives.

Omissions in the Paper

In this regard we note relevant matters the consultation paper did not address and that we believe must be part of an overarching gas substitution policy framework. These include:

1 Banning New Gas Connections

The Paper is silent on this aspect. This is a major omission.

A key component of gas decarbonisation strategies must be the inclusion of a ban on new gas connections.

There is no point in looking at gas energy alternatives if the whole planning framework enables new gas connections to new builds, suburbs and housing developments.
Given the huge residential gas distribution network already in Victoria (which as the Consultation Paper points out includes 83% of households), limiting further expansion of this network is essential.

A date for a state-wide phase out should be set as soon as possible, with a timeframe to enable the building industry to transition and any builds with existing gas permits to proceed. We suggest new gas connections should be completely phased out by 2025.

We note the position of NZ and the ACT and in many other jurisdictions where such policy changes are being put in place.

It is a much cheaper option for new builds to be all electric, with efficient appliances and ideally solar generated power than changing from gas to electricification in existing homes (Grattan Institute, Flame Out, Nov 2020, p46,https://grattan.edu.au/wp-content/uploads/2020/11/Flame-out-Grattan-report.pdf).

2 Phasing out gas in public and local government entities

Another important element is to provide incentives and supports for the immediate phasing out of gas in government departments, schools, hospitals and other State public entities.

Local Councils such as Yarra should be able to make immediate planning decisions concerning the phase out of gas for new developments and in public buildings and amenities such as libraries, pools, citizen centres/community houses in their municipalities. (The Age, 5 May 2021)

In California it is the municipal level that has been at the forefront of banning new gas, with over 30 Councils now taking up this position.

3 New Gas generation

A further aspect not covered directly in the paper is the need to address the phase out of new gas generation projects in Victoria. This measure must go hand in hand with substitution measures as they are taken up.

The further development of new gas fields runs completely counter to a gas subsitution/decarbonisation policy.

This is also critical to achieving Victoria's emissions targets.

The International Energy Agency (IEA), in its recent comprehensive report, *Net 0 by 2050 , A Roadmap for the Global Energy Sector* (May 2021), has called for a halt to all new gas and oil field developments globally, effective immediately.

To achieve Net 0 in Victoria will require these measures to be implemented now. (Note we further discuss this imperative as part of our response to Issue 3).

We also note the lifting of the moratorium on gas exploration. This is a policy that we emphatically do not support, and which runs counter to the position of the IEA and progress on gas substitution and decarbonisation..

4 Gas imports

Similarly, we strongly contend that this process must address the question of gas imports in Victoria. As a community group at the forefront of opposition to the AGL proposal at Crib Point, we have firsthand knowledge and understanding of the very real impacts of proposed gas import proposals.

In the case of the AGL project, the key criterion for rejection of the proposal was the environmental impacts in a Ramsar site. However, there were many other aspects that should have played a critical role in the decision making process, including the impacts an import terminal would have on increasing Victoria's emissions and facilitating the ongoing usage of gas in Victoria for the next 20 years.

Although the Crib Point project was rejected, another import proposal is currently undergoing its EES. We understand that this process must play out, but we do not believe that the Viva Energy proposal should be approved, due to not only its environmental impacts but also because importation and regassification of LNG runs completely counter to moving forwards on gas substitution/decarbonisation.

As a matter of policy and principle, and consistent with the IEA *Roadmap to Net 0,* the Victorian Government should decide that it will not consider any new gas import terminals.

Responses to Pathway questions

The Consultation paper identifies five options as emerging pathways away from gas. We will focus at a broad level on some of the questions identified, while recognising that we do not have the direct technical knowledge to comment on others.

improving energy efficiency and moving to electrical efficient appliances

Across the five options it is evident that improving energy efficiency and moving to electrical efficient appliances provides immediate substitution measures that are already being implemented but could be accelerated. These two options strongly complement each other.

They demonstrate immediate benefits with negligible risks, and are proven approaches. Although they may lead to higher upfront costs for consumers now, if it involves substituting existing aspects of the build like windows or heat-pump heating and appliances, these costs will be recouped over time through lower energy usage and impacts on emissions.

Getting people to understand these cost/benefits will be essential to building consumer confidence and support for substitution measures.

Energy efficiency and electrification of gas appliances with heat pump technology also supports improved safety, in comparison to older gas appliances which have been the cause of numerous house fires.

To improve affordability and equity, the rebate schemes for hot water heat pumps should be extended to other appliances such as split system air conditioners. We strongly believe that the decision to lower the rebates for solar/battery/hot water heat pumps has been a retrograde step and the original rebates should be reinstated.

In terms of electrification measures, key aspects will be energy sources and energy reliability – as discussed in our Response to Key Issues below.

Electrification will require more solar and other renewable energy generation in order to achieve the necessary decarbonisation effects. There is no point in choosing electrification over gas if the electricity is predominantly supplied by brown coal. This, therefore, requires immediate, heavy government investmentin in large-scale grid solar and battery storage – combined with home solar and battery storage.

In this regard a subsidy for a home battery (on top of another energy subsidy) may be an economically sensible measure in the short term. At present, batteries are extremely expensive compared to the cost of solar installation, and it makes sense that home battery uptake is also supported by government.

Accordingly, while we congratulate the government on its current investments, we argue that much more is needed if we are to reach Net 0.

In terms of new builds, as stated previously, it is much more cost effective to start with electrification/energy efficient builds and with solar panels and batteries, than to reconfigure existing households. Government can play a much stronger role in mandating high efficiency building standards.

Substituting hydrogen/biomethane for natural gas

These two options offer another approach to gas substitution that could be used as adjuncts with the first two options (energy efficiency and electrification) or perhaps more effectively for specific purposes.

These options have potential but are far behind the first two options in terms of large-scale capabilities, safety and affordability.

However, they could ensure that existing gas infrastructure is utilized rather than becoming stranded assets, and would provide ongoing work for the gas workforce, as well as perhaps having particular applications in some industries.

Hydrogen is obviously a key focus at the Federal level, as it is in Victoria. As the Consultation paper points out, there are two way of producing hydrogen and both are the subject of current research and investigation.

SWP contends that green hydrogen produced through electrolysis is the only option that should be considered. We reject the alternative being piloted through the HESC project, not only because it continues the use of a fossil fuel that should be left in the ground, but because it will rely on Carbon Capture and Storage (CCS) to counter its emissions. We note that CCS has not occurred as part of the pilot, to date, although this is a requirement of the pilot.

Further, the HESC project could have horrendous environmental impacts on Westernport Bay if it ever went to production stage and the Bay became a key port for hydrogen exports. SWP will oppose the further industrialization of the Bay.

In contrast, Victoria's *Renewable Hydrogen Industry Development Plan* identifies hydrogen produced using renewable energy as the only way forward for hydrogen development.

As both this Plan and the Options paper identify, this energy source could be blended at up to 10% with gas, using existing infrastructure. Nevertheless, in the longer term it seems that huge upgrades of existing gas infrastructure will be needed if renewable hydrogen replaces gas and these costs may well be too high relative to the alternatives and known outcomes of electric renewables based power.

We understand that *biomethane* is an alternative that would require no changes to the gas distribution network and, as such, could be a more cost effective option than full scale hydrogen. Biogas has the added environmental impact of turning waste products into a renewable energy source. At this point we understand that biogas is very small scale in Australia but opportunities exist to expand. However, to be carbon neutral, biogas, like hydrogen from coal, will require expensive and as yet unproven CCS technologies. Its role maybe better placed in specific industries rather than as a broad based energy source.

Option 5 Energy Technologies

We make no comments about options i), iii) and iv), on the basis of insufficient knowledge.

Re (ii) Carbon Capture and Storage (CCS), this technology is still unproven at a large scale. It is extremely expensive relative to renewables and the environmental risks in the longer term are unknown.

The recent failure of CCS technology by Chevron at its giant Gorgon LNG project in WA is a demonstration of how far this technology is from being viable, if it ever can be. This project is the only commercial scale project in Australia and has cost more than $3billion, yet it has failed to meet its 5 year targets by more than 70%. It is unlikely to ever meet its emissions capture that is required.

As the Climate Council has noted, CCS is extremely expensive and unproven, and designed to support the fossil fuel industry remaining in the mix. By contrast, renewable sources of energy like wind and solar have plummeted in cost (*Renew Economy*, 19 July 2021).

From this perspective we do not see investment in CCS as a key way forward for Victoria. CCS would seem to be a way of keeping us with the cart and horse when we should be moving to the automobile.

Fugitive Emissions

As identified, fugitive emissions contribute some 3-4% of Victoria's gas emissions, although the amount could be higher as these emissions are often underestimated.

The options paper identifies the need to address these emissions as part of any roadmap, which we support. These will require technical options beyond our knowledge.

We also make the point that if gas usage is lowered and finally ceases, then these fugitive emissions will go down/cease.

Response to key issues

Issue 1: Reliability of electricity

Gas substitution will necessitate increased generation of renewable electrical power to match the energy needs of consumers and business. As noted earlier in our response, this will require significant investments in large-scale renewable power sources and battery storage.

Concerns raised over electricity reliability stem from both shifting the grid to peak power in winter, as well as summer (with a switch from gas to electricity, especially for heating) and in ensuring that the grid can operate with multiple sources of feed-in power.

The work of AEMO in its Integrated System Plan will be pivotal to ensuring such reliability. The way forward is evident, but we must ensure necessary investments in the grid are put in place.

Key Issue 2: Transitioning to more sustainable gaseous fuels:

Our response is covered in consideration of Options 3 & 4. While we see some benefits in further investments of renewable hydrogen, the considerable costs and technical difficulties of substituting gas for hydrogen in our gas networks appear to be prohibitive. Consideration of further research on the technical issues of biomethane and carbon capture may show them to be viable in the longer term for specific uses.

Key Issue 3: Maintaining the reliability, affordability and safety of gas supply

It is interesting how this phrase commonly appears in communications around gas (the same terminology forming part of the Crib Point EES).

It seems to us that if the focus is on moving away from gas, then this issue needs to be couched in different terms. The wording suggests a status quo rather than a shift in priorities away from gas.

Reliability and security of supply is linked directly to gas demand - which is falling and is expected to continue falling in all applications – industrial, residential/commercial and GPG..

Demand will be lowered further through the explicit measures put forward in this paper - by switching to electrification and potentially other sources of gaseous energy. In turn, security and reliability are assured without the need to initiate new sources of gas supply.

Further, AEMO's 2021 Gas Statement of Opportunities (https://aemo.com.au/-/media/files/gas/national_planning_and_forecasting/gsoo/2021/2021-gas-statement-of-opportunities.pdf?la=en) indicates that the outlook for gas has improved yet again over 2020, despite the lowering reserves at Longford. AEMO state that with the development of fields at Golden Beach and the Gippsland Basin Joint Venture, any projected gas supply gaps would not emerge until the end of the decade. AEMO also forecasts that gas demand is likely to decline further in Victoria because of the efficiency measures which 'will have a moderating effect on Victorian industrial and residential/commercial consumption' (AEMO, 2021,p 7).

The Gas Substitution Consultation paper suggests a number of options for maintaining our gas supply, including gas from further Victorian sources, gas from the NSW import terminal, gas transported by pipeline from other sources on the East Coast and an import terminal in Victoria. These are also all identified by AEMO.

With the continuing decline in demand, which will be accelerated by proposed gas substitution initiatives, and in combination with current operating and committed gas projects and other interstate sources (if needed), the reality is that we have enough gas as we transition to other renewable alternatives.

Government needs to send a signal to the market as soon as possible that gas is on the way out. This roadmap and the initiatives that follow may provide that signal but, consistent with the IEA's view, we must also halt new fossil fuel projects, now, if we are to reach Net 0.

To reiterate, we do not see a need for, nor do we support, ongoing gas exploration, and new generation beyond existing and current commercial commitments to ensure reliability and security of supply. Nor are import terminals needed.

Government support for an LNG import terminal would run completely counter to the spirit and progress away from gas as set out in this Consultation Paper and run counter to Victoria's climate change strategy and emissions targets.

On the question of affordability, the reality is that gas is no longer an affordable energy source and that is not going to change; if anything, gas will continue to increase in price with Australian markets wholly linked to the netback price. So rather than focus on how the gas system could remain affordable the language and communications we need to use to support the transition out of gas is to demonstrate its high cost to consumers and that alternative renewables are now much cheaper.

On the question of safety, the transition will take time. As such, the issue of safety should not change; the current regulatory requirements will remain in place.

Issue 4: Supporting the Victorian workforce

SWP agrees this is an important issue and one that requires effective measures. A tripartite model is one that should be recommended. More detail is needed to consider specific options such as the current age of the 20,000 people in the workforce. It may be that redundancies are appropriate for some whilst reskilling is essential for others, particularly around green hydrogen developments.

Issue 5: Managing uncertainty in transition

This is certainly a factor that will be critical to achieving broad understanding, acceptance and support for moving way from gas. As suggested earlier, a key approach must be a clear and easily understood and ongoing education campaign around why this is needed. The emissions targets set by Victoria are well supported; getting people to understand that gas must be phased out to meet these targets is critical; so too the messaging that electrification will be cheaper and more climate friendly.

As part of such education it is vital to counter the slogans of the Federal government and the fossil fuel industry that shifting way from gas will mean no gas for bbqs or cooking.

All change requires managing uncertainty and the government has a pivotal role in taking the population forward.

Issue 6: an equitable transition

The question of equity is important and the Victorian government through its energy upgrades program and solar rebates has set up a range of initiatives to ensure access and opportunity for those on lower incomes. These are sensible and important measures that, as we mentioned earlier, could be expanded.

Equity is also important from the perspective of equitable access to such schemes and it is pleasing to learn the planning laws have been changed to allow those on gas hot water systems to switch to heat pumps and access to rebates. Such changes are critical and it is important that any remaining planning laws that put gas over electricity and upgrades are not still in operation.

An equitable transition also means that people are provided with supports and incentives to get off gas and they are not be left behind with older inefficient heating and hot water systems that are more costly to operate. Rebates to landlords for solar is a great policy and further rebates that support heat pump technologies in rental properties is warranted.

The government needs to expand these initiatives.

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SWP appreciates the opportunity to present our perspectives and we look forward to the next stage of this process.

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