



VICTORIAN GAS SUBSTITUTION ROADMAP – CONSULTATION PAPER

SMART ENERGY COUNCIL SUBMISSION

Thank you for the opportunity to comment on the Victorian Government’s Gas Substitution Roadmap.

The Smart Energy Council is a peak, independent body for Australia’s solar, energy storage and renewable hydrogen industry. Our Hydrogen Australia division has developed a world-leading Zero Carbon Certification Scheme, an industry-led, project-based certificate of origin scheme for renewable hydrogen, ammonia and metals projects.

The Smart Energy Council and Hydrogen Australia are very pleased to have the Victorian Government as a Founding Partner in our Zero Carbon Certification Scheme, joining the ACT, Queensland and Western Australian Governments and 11 others. We look forward to continuing to work with the Victorian Government to identify, promote and certify renewable hydrogen projects.

The Smart Energy Council welcomes the Victorian Government Gas Substitution Roadmap Consultation Paper. In particular, we commend the work the Victorian Government is doing in ‘accelerating the development and deployment of all opportunities to decarbonise [fossil] gas supply, promote economic growth and create clean energy jobs.’

The Smart Energy Council supports Victoria’s aim to capture low-cost energy efficiency and electrification opportunities and to be a world leader in the adoption of zero emission energy technologies.

The Smart Energy Council takes this opportunity to congratulate the Victorian Government’s Victorian Renewable Hydrogen Industry Development Plan. It is critically important that the Victorian Government focuses solely on accelerating renewable hydrogen, renewable ammonia and renewable metals – not hydrogen produced from fossil fuels such as brown coal and fossil gas.

The Smart Energy Council strongly support the electrification of everything as soon as practicable, using only renewable energy and smart energy technologies, and using certified renewable hydrogen for ‘hard to abate’ sectors including industrial processes (e.g. renewable ammonia, renewable steel and renewable aluminium).

THE INDEPENDENT BODY FOR THE SMART ENERGY INDUSTRY IN AUSTRALIA

PO BOX 231, MAWSON ACT 2607
INFO@SMARTENERGY.ORG.AU
SMARTENERGY.ORG.AU
ABN 32 006 824 148



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Comments in response to Key Issues and Questions:

Key Issue 1: Maintaining electricity reliability with new sources of demand.

Comment: The Smart Energy Council supports the measures outlined in the consultation paper. Further, strong regulatory and market-based policies are needed to create demand for alternatives to fossil gas and accelerate the transition.

Key Issue 2: Transitioning to more sustainable gaseous fuels with minimal disruption to end-users.

Comment: The Smart Energy Council strongly supports the electrification of everything and the use of renewable hydrogen for those ‘hard-to-abate’ sectors. As noted in the discussion paper, using hydrogen in domestic applications is complicated and would require changes to pipelines, metering and equipment – potentially creating disruption for end-users and higher costs to consumers.

There is no linear path beyond a maximum of 20% by volume into existing fossil gas pipelines. The proposals to do this would see only 10% by volume injected by 2030 with 97% of CO₂ emissions continuing until then from the burning of the fossil gas and continued releases of methane. This would result in relatively trivial emission reductions, far from what is needed to meet Victoria’s emission reduction targets, let alone more ambitious targets. Direct electrification of existing gas appliances and heating in residential and commercial sectors offer rapid emissions reductions orders of magnitude higher utilising the increasingly cleaner grid and at a lower cost.

Any use of hydrogen beyond 20% requires a full network upgrade and/or replacement – it’s not a linear transition to 100% hydrogen. All the pipes, pumps, joints of the transmission and distribution networks need to be checked and tested at a minimum, and much will need to be replaced or built anew. Every single appliance will need to be assessed for suitability, all that are OK will need to be re-jetted and have new burners fitted. Householders will need to pay for this and the cost will be non-trivial. Electrification is much easier - and in most cases the networks will need no changes.

In addition to the challenges and perverse or unintended consequences of injecting hydrogen into existing gas infrastructure – the Smart Energy Council draws attention to the recent paper by Graeme Pearman at the University of Melbourne titled ‘Don’t rush into a

hydrogen economy until we know all the risks to our climate.’ Put simply, hydrogen is a very small molecule and could easily leak from gas infrastructure having significant negative impacts on global warming due to its interaction with other chemicals in the atmosphere. Therefore, any use of hydrogen requires careful design, build and strong leak detection and repair measures.

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

Comment: This area needs acceleration in Victoria. Given the scale and reliance on fossil gas in Victoria relative to other States it is the biggest risk and biggest opportunity facing Victoria as the world moves to decarbonise its energy systems. Victoria must not allow more development of fossil gas fields on or off-shore and must quickly transition to electrification and use of renewable hydrogen for ‘hard-to-abate’ sectors. Much stronger targets, policy and measures are urgently needed.

There should be no expansion of fossil gas transmission pipeline infrastructure and no requirements for fossil gas distribution infrastructure in greenfields developments. To reach net-zero emissions by 2050 requires less fossil gas, not more. Expanding pipeline fossil gas is the antithesis of less gas, not more. The impacts of methane have been reinforced by the latest Intergovernmental Panel on Climate Change report and it is likely that in addition to carbon pricing, methane is going to be priced into the marketplace because of its massive short term impacts.

Key Issue 4: Supporting Victoria’s workforce, industry and the institutions that support them.

Comment: The Smart Energy Council welcomes the work Victoria is doing in this area. Further emphasis on new zero emission technologies involving renewable hydrogen are needed.

Key Issue 5: Managing uncertainty in the transition.

Comment: The discussion paper identifies key uncertainties which need to be taken into account. Further, the global demand for carbon intensive products and services provided by Victoria is uncertain. Whilst pursuing ‘no regret’s is admirable, there is a big risk that the cautionary and staged approach to decarbonising fossil gas will **not** be quick enough to mitigate risks to Victorian businesses and the economy.

Key Issue 6: Transitioning the Victorian economy efficiently and equitably.

Comment: The Smart Energy Council supports the Victorian Government's work and programs in this area such as the Victorian Energy Upgrades and the Solar Homes initiatives. The Smart Energy Council supports further emphasis on helping lower income people make the transition to zero carbon. This includes but is not limited to: electrification of heating and appliances, installation of solar and renewable electricity, access and uptake of batteries, use of smart technologies and microgrids, and policies to accelerate the uptake of electric and other zero carbon vehicles.

Comment: The proposed outcomes framework and multi-criteria assessment is generally supported. In addition to 'Emissions reduction' and 'Environmental Impacts' the framework measures should include at least one relating specifically to 'Renewable Energy' as would be measured against contributions to the Victorian Renewable Energy Target. Further, the measures are quite high level and might miss some important key performance indicators such as 'Renewable Hydrogen' which could be measured by how quickly the cost of production is reduced, the technology deployed and quantity is produced (including exports). There is also a risk using a multi-criteria framework that appropriate weighting is unclear, subjective and/or incorrect.

Yours sincerely



John Grimes
Chief Executive

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