

National review into extending the regulatory frameworks to hydrogen and renewable gases

I worked in oil refining for over 35 years as a chemical engineer. I fully understand the power and utility of fossil fuels and how addicted our society / civilization has become to them. Yet our long term interests are that we MUST divest ourselves off fossil fuels, including natural gas ASAP.

The “refined” approach objective is “to promote economic efficiency in the long-term interests of consumers” yet it does nothing of the sort.

The objective is stated as: “The extension of the national framework is intended to: Foster the development of a competitive and cost-efficient hydrogen and renewable gas industry that promotes economic efficiency in the long-term interests of consumers.”

My submission is that in fact this whole proposal has almost nothing to do with consumers' long term interests and everything to do with artificially subsidising the life of the gas supply network.

The long term interests of customers are to address climate change as the serious crisis that it is.

António Guterres (Secretary-General of the United Nations)¹:

“... Unchecked carbon pollution is forcing the world's most vulnerable on a frog march to destruction – now.

The facts are undeniable.

This abdication of leadership is criminal.

The world's biggest polluters are guilty of arson of our only home.

...

Oil and gas giants - and their underwriters – are also on notice.

You cannot claim to be green while your plans and projects undermine the 2050 net-zero target **and ignore the major emissions cuts that must occur this decade.**

People see through this smokescreen.

...

The G20 must lead the way, or humanity will pay an even more tragic price.

I know people everywhere are anxious and angry.

I am, too.

Now is the time to turn rage into action.

Every fraction of a degree matters.

Every voice can make a difference.

And every second counts.

Thank you.”

The proposed pipeline investment for hydrogen readiness is wasteful and emission intensive. It's a diversion of scarce and well trained resources away from much higher priority work such as building & operating zero emission electricity generation, storage and transmission.

¹ Launch of the IPCC report 28 Feb 2022: <https://media.un.org/en/asset/k1x/k1xcijxjhp>

Hydrogen will do little to increase supply of gas for at least a decade. It certainly cannot help with any short-term mismatch between supply and demand. The pipeline network cannot carry more than 10% by volume and 3% by energy intensity of the mix. Emissions from methane will still accumulate.

We cannot claim to “look after consumers” while doing anything to promote or encourage accumulating yet more GHG in our atmosphere.

To quote ACT Energy Minister Shane Rattenbury: (via <https://reneweconomy.com.au/fossil-gas-market-facing-death-spiral-says-act-energy-minister/>)

“Our analysis suggests that green gases cannot fully replace network distributed fossil fuel gas in the ACT. They potentially can play a niche role. They can play particular roles in things like heavy transport, or perhaps in industrial applications, but we do not see a future where we will be piping hydrogen or biogas to individual consumer households.”

Switching to 100% hydrogen would likely require a complete replacement of gas appliances with hydrogen ready appliances. Every single household and any company that has a gas connection would need to change their devices.

While both hydrogen and fossil gas can be used as a source of thermal heat, the different burn characteristics of hydrogen would likely require the installation of specialised appliances. Injecting high concentrations of hydrogen into standard gas pipelines can also lead to significant degradation of the pipes.

Rattenbury said that electrification would be the most effective way to decarbonise residential energy use, echoing the calls from energy technology experts like Saul Griffith, who has called for as much energy use as possible to be shifted to electricity, so that it can be met with zero emissions supplies of wind and solar.”

I live in Victoria, not the ACT, but the laws of physics don't change between states. A Victorian hydrogen economy is more likely to be based on onsite production and a dedicated small number of pipelines.

A Victorian hydrogen economy is more likely to be based on onsite production and a dedicated small number of specialist pipelines. The worst possible way to foster a hydrogen industry is to add hydrogen to the gas mix to households, because electrification is rapidly becoming cheaper. The focus should be on hard-to-electrify sectors like high-temperature heating and long-haul transport.

Finally, I would like to see the definition of hydrogen blends and other gases stating the carbon intensity of a) their production method and b) their carbon emissions when burnt. Consumers want transparent information about products they buy - this must include gas blends.