Transitioning off Gas

Planned retirement of the East Coast Domestic Gas Network

PROPOSAL - “That the Federal government introduce legislation to retire the East Coast fossil gas network by 2050"

Preamble:

The administration of utilities in Australia has historically been a state responsibility. However, with the distribution of electrical power in the eastern states, there is now a power grid that has increasingly become the shared responsibility between state and federal governments.

This shared responsibility also applies to the distribution of domestic Natural Gas now that it is a piped network in all eastern states. Note that there is nothing “Natural” about this gas and a more accurate term is **fossil gas**.

From the party political view:

- All major parties have a "Net Zero by 2050" policy so this suggestion is consistent with that broad aim.
- The Victorian government's "Gas Substitution Road Map" shows virtually no fossil gas by the mid 2040s (refer to the appendix). While they are now stopping gas connections to new housing developments (as of January 2024), they do not have a plan to retire the Victorian gas network.
- There is a lot of noise and misinformation about gas shortages and renewable electrical supply problems. It is important to communicate that the transition plan to retire gas will be coordinated with the power supply - in particular that the winter supply of fossil gas in Victoria is maintained until it is no longer required.
- The eastern fossil gas network includes NSW, VIC, QLD, SA, and TAS. WA is not included at this time as it does not have an interstate network.
- Once the gas demand starts to drop significantly, the domestic gas network will enter a commercial death spiral and there will need to be shared federal and state intervention, as we have seen recently with the disruption of coal fired power by renewables. This gas death spiral is now being referred to outside the mainstream press.
- A commitment to retire Australia’s fossil gas network would be a first internationally. It would send a strong signal to the world that the days of fossil fuels are rapidly coming to an end.
- The recent high coal and gas pricing is making the fossil fuel producers unpopular, so it is a good time to raise the retirement of the gas network.

Kylie McIntosh *David Williams*

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President	Vice President

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Other relevant information:

- The emissions from burning domestic gas in Victoria account for 13 $MtCO_2$/y - about 2.5% of Australia's current total emissions. For the whole East Coast grid, it is about 36$MtCO_2$/y - about 7% of Australia's current total emissions(all based on 2020 CO_2 levels).

- 36 $MtCO_2$/y would be a significant portion of 142 $MtCO_2$/y that the federal government needs to achieve for its 43% reduction (on 2005 emissions) that is now committed by legislation. It is unlikely that the retirement could be achieved in the 2030 time frame, but a significant portion of the committed reduction would be achieved by starting the retirement of the fossil gas networks in 2023.
  References and Calculations

Notes:

- It is important to get started with some popular gas retirement projects early and before a "gas retirement plan" is complete.

  Public heated swimming pools are big gas users and selecting a dozen popular pools in the capital cities and regional centres to convert to heat pumps would be a good start. They are also good candidates for integrated energy centres as they have large roof areas for PV solar and spare real-estate for batteries.

  Another good starting project would be the conversion of residential space heating from gas to heat pumps to reduce winter demand in Victoria and Tasmania.

- The size of this project should not be underestimated. There are two million residential properties connected to gas in Victoria - you need to disconnect gas at 400 residences a day, five days a week for 20 years to complete the work. Retiring the gas in commercial and industrial properties will also be a massive task.

- A "fossil gas retirement plan" will set a timeline and budget.
  A target for total retirement by 2050 would be a credible objective with regular review points along the way. The project could well turn out to be self-funding with cheap electricity and the freeing up of a lot of land for redevelopment.