

Victorian Independent Expert Panel
Department of Environment, Land, Water and Planning

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Victoria's Emissions Reduction Target for 2035

The Australian Energy Council ('AEC') welcomes the opportunity to make a submission to Victoria's consultation on a *Victorian Emissions Reduction Target for 2035 Issues Paper* ('Issues Paper').

The AEC is the peak industry body for electricity and downstream natural gas businesses operating in the competitive wholesale and retail energy markets. AEC members generate and sell energy to over 10 million homes and businesses and are major investors in renewable energy generation. The AEC supports reaching net-zero by 2050 as well as a 55 per cent emissions reduction target by 2035 and is committed to delivering the energy transition for the benefit of consumers.

The AEC actively participated in the setting of Victoria's 2025 and 2030 emissions reduction targets and looks forward to informing the 2035 target. The AEC is in a good position to positively contribute to this consultation, as late last year the AEC [announced](#) its own support for an economy-wide emissions reduction target of 55 percent by 2035, which built on its [endorsement](#) of a net-zero by 2050 target in June 2020.¹ As part of this discussion, the AEC has released a series of research papers outlining decarbonisation opportunities in Australia, which Victoria can and should pursue to maintain or exceed its alignment with a net-zero trajectory by 2050. Capitalising on these opportunities will require the Victorian Government to incentivise emissions reduction efforts in lagging sectors like transport and stationary energy.

National versus sub-national approaches to reducing electricity sector emissions

During consultation to Victoria's 2025 and 2030 targets, the AEC expressed its view that carbon abatement policy that covers the electricity sector is most efficient at a national rather than sub-national level. The AEC maintains this view but understands that the Expert Panel is directed in its Terms of Reference to set an interim carbon goal for Victoria.

As a matter of principle, the AEC has reiterated here why sub-national carbon policy is less optimal in the electricity sector context and encourages the Victorian Government to advocate for a national carbon policy both to the Federal Government, and all jurisdictions via the National Cabinet. A national carbon policy is preferable since Victoria is part of the National Electricity Market ('NEM') and national gas grid so any actions taken in Victoria cannot exist in isolation.

This brings forward a major dilemma with sub-national carbon policy, being carbon leakage. As Victoria phases out its fossil fuel generation, the lost generation will not be immediately filled by renewable generation. Instead, generation from other states will fill the hole, including from Queensland, which recently [re-committed](#) to no closures of its coal-fired power fleet.² This ultimately makes it difficult for Victoria to measure the environmental impact of its own actions, and may simply inflate emissions elsewhere unless other states follow suit (hence, the benefits of a national policy).

¹ Australian Energy Council 2021, 'Australian Energy Council backs economy-wide 55% emissions cut by 2035', <https://www.energycouncil.com.au/news/australian-energy-council-backs-economy-wide-55-emissions-cut-by-2035/>; Australian Energy Council 2020, 'Australian Energy Council backs net zero emissions by 2050', <https://www.energycouncil.com.au/news/australian-energy-council-backs-net-zero-emissions-by-2050/>.

² Seven News 2022, 'Qld Govt Rules Out Any Coal Plant Closures', <https://7news.com.au/politics/qld-govt-rules-out-any-coal-plant-closures-c-6678323>.

Secondly, there is the inefficiency of geographical non-neutrality. A major benefit of having an interconnected electricity market is that each state can lean on the other's generation resources when it is more efficient to do so. For example, Queensland, New South Wales and South Australia have superior solar resources than any part of Victoria, South Australia has superior wind, and Tasmania has existing hydropower generation and pumped hydro development opportunities. That is not to suggest that renewable generation should never be built in Victoria – transportation is also costly - but that a geographically-neutral competitive path is likely to discover cheaper solutions.

Finally, there is the problem of market disruption. Disorderly closure can result in major fluctuations to the wholesale price, as shown when Hazelwood closed, and the fear of this happening again has aroused considerable political attention. The previous Expert Panel sidestepped this issue by stating that closure notice periods will minimise any disorderly outcomes. As the AEC recently [explained](#) in response to the proposal to extend closure periods to five years, this cannot stop generation from closing in circumstances where they are no longer economic or technically operable – the two factors accelerating the early closures we are starting to see.³ The Expert Panel here should recognise that its 2035 target will have implications for the viability of Victoria's coal-fired power fleet, which in turn, will have impacts on electricity prices in the NEM – again re-illustrating the benefits of a national policy because it can manage these closures more efficiently. This is not an argument against any sub-national climate ambition, but rather means the Expert Panel will need to give extra weight to balancing the stated social, economic, and environmental considerations.

Most cost-effective decarbonisation opportunities

When implementing sub-national decarbonisation policy, it is critical that Victoria first focusses on the lowest-hanging fruit, being those options that are most readily and economically available. In general, if policy is technology neutral, market forces will incentivise the quickest and cheapest possible environmental benefit.

This point is particularly pertinent here in light of Victoria's recent announcement that it will subsidise a very large quantity of offshore wind generation. In its draft [Integrated System Plan](#), AEMO did not anticipate building any offshore wind generation in Australia, as on-shore wind is considerably cheaper, quicker to build and less complex than offshore wind.⁴ Continents that are pursuing offshore wind, such as Europe, have done because land is scarce, unlike in Australia. A large scheme dedicated to one, novel technology, is likely to slow and increase the cost of Victorian decarbonisation.

Decarbonisation opportunities in other sectors

Notwithstanding the philosophical views expressed above, there is a clear practical reason why focusing excessively on the electricity sector is counterproductive. The table below, sourced from DISER's [Australia's Emissions Projections 2021](#), illustrates that emissions from the electricity sector will be less than transport and stationary energy by 2030.⁵ This is due to the substantial efforts the electricity sector is making to decarbonise, but also the concerning projection that emissions from transport and stationary energy will *increase* over the next decade. Furthermore, the projections for

³ Australian Energy Council 2022, 'Closure Notice Rules Not As Simple As They Sound', <https://www.energycouncil.com.au/analysis/closure-notice-rules-not-as-simple-as-they-sound/>.

⁴ AEMO 2021, 'Draft 2022 Integrated System Plan', <https://aemo.com.au/-/media/files/major-publications/isp/2022/draft-2022-integrated-system-plan.pdf>.

⁵ Department of Industry, Science, Energy and Resources (DISER) 2021, 'Australia's Emissions Projections 2021', https://www.industry.gov.au/sites/default/files/October%202021/document/australias_emissions_projection_s_2021_0.pdf.

electricity are constantly revised due to it being overly conservative,⁶ and the AEC expects the 2022 projections to show even further decarbonisation progress in the electricity sector.

Table 2: Sectoral breakdown of 2021 projections results to 2030, Mt CO₂-e

Emissions by sector (Mt CO ₂ -e)	National Greenhouse Gas Inventory		Projection
	2005	2019	2030
Electricity	197	179	88
Stationary energy	82	99	99
Transport	82	100	97
Fugitives	41	55	56
Agriculture	86	75	76
Industrial processes and product use	31	32	28
Waste	16	14	11
Land use, land-use change and forestry	89	-25	-16
Total	624	529	439

Note: totals do not sum due to rounding.

This context is raised because, to date, Victoria's decarbonisation policies with material impacts have been limited almost exclusively to electricity. In the AEC's view, the inaction of other sectors means there is a real risk Victoria will stumble in its efforts to be net-zero by 2050 if left unaddressed. The Issues Paper partly recognises this, stating that 'there is significant uncertainty about the scale and pace of change in different sectors of the economy'.

Promisingly, there are significant decarbonisation opportunities available in some of these other sectors, and they are conducive to sub-national policies. These come in the transport and residential heat sectors, where electrification offers an immediate and economically efficient cleaner alternative. The AEC recently commissioned two research papers exploring the decarbonisation opportunities in [transport](#) and [residential heat](#) respectively.⁷

Electrifying transport

A common misconception about electrifying transport is that it is only a greener option if the electricity grid is fully decarbonised. Even at current emissions intensity levels, electric vehicles (EVs) produce lower emissions per kilometre than equivalent internal combustion engine (ICE) cars. This is because of thermodynamic efficiencies – explained in greater detail [here](#).⁸ Of course, as the electricity grid progressively decarbonises, this will lead to further emissions reduction.

In terms of policies to incentivise uptake of EVs, introducing EVs into the Victorian Government car fleet should be the immediate priority. Victoria does promisingly have a Zero Emissions Vehicle Roadmap, which commits to 400 vehicles being replaced by EVs by 2023, but could arguably go further. Setting incremental government fleet targets up to 2035 could form part of the roadmap.

⁶ For example, emissions from the electricity sector in 2020 were projected to be 111 million tonnes. This has been revised down to 87 million tonnes in 2021.

⁷ Australian Energy Council 2022, 'Australia's Energy Future: Decarbonising Transport', <https://www.energycouncil.com.au/media/luvmyfcd/decarbonising-transport.pdf>; Australian Energy Council 2022, 'Australia's Energy Future: Electrification & Heat', <https://www.energycouncil.com.au/media/qn3cwx4m/electrification-and-heat.pdf>.

⁸ Australian Energy Council 2020, 'EVs: Are They Really More Efficient?', <https://www.energycouncil.com.au/analysis/evs-are-they-really-more-efficient/>.

Electrifying residential heat

The AEC was very encouraged by the release of Victoria's Gas Substitution Roadmap mid last year to explore alternatives to natural gas. The AEC has [submitted](#) in support.⁹ Victorian households have traditionally relied on gas for heating and cooking, more so than any other state. But, continuing this reliance is no longer compatible with Victoria's commitment to be net-zero, nor is it good for the hip pocket of households as the cost of gas as a residential heat source now exceeds electricity. Electric technologies like heat pumps and reverse cycle air conditioning now represent a cleaner and cheaper future for households and commercial buildings.

In terms of policies to incentivise small customer electrification, the AEC looks forward to the recommendations of the Substitution Roadmap. In the short-term we anticipate changes in relation to new connections, and education of consumers as to the advantages of electrification. In the medium-term more direct policy will be required to ensure end of life gas appliances are replaced with electric appliances.

Health costs from air pollution

When submitting to Victoria's 2021-2030 targets, the AEC raised [concern](#) (see pages 3 to 4) about misleading claims relating to the costs of air pollution.¹⁰ These claims were unfortunately not responded to, let alone corrected, and persisted in the Final Report. The AEC notes that similar, albeit more cautious, air pollution cost estimates have been included in the Issues Paper. We ask that the 'analysis undertaken for the Victorian Government' on these costs be made publicly available for stakeholders to consider.

Finally, the AEC notes that the Issues Paper states 'this Panel will seek to develop updated health cost estimates based on the most recent data available'. The AEC encourages there to be transparency over how the Expert Panel intends to do this. We are open to working with the Expert Panel to ensure the estimates and data relied on are robust as possible.

If the Panel wishes to make further claims on the cost of air pollution, we respectfully request that it first responds to the concerns about the data that we have repeatedly raised in earlier stages.

Any questions about this submission should be addressed to Rhys Thomas, by email Rhys.Thomas@energycouncil.com.au or mobile on 0450 150 794.

Yours sincerely,



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⁹ Australian Energy Council 2022, 'Submission to Victorian Gas Substitution Roadmap Consultation Paper', <https://www.energycouncil.com.au/media/3espt34d/20210806-aec-submission-vic-gas-substitution-roadmap-consultation-paper.pdf>.

¹⁰ Australian Energy Council 2019, 'Submission to Independent Expert Panel on Interim Emissions Reduction Targets for Victoria (2021-2030)', <https://www.energycouncil.com.au/media/oafp2agg/20190722-aec-submission-to-the-final-report-on-victorian-emissions-reduction-targets.pdf>.