Australian Government
Climate Change Authority

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Setting, Tracking and Achieving Australia's Emissions Reduction Targets

The Australian Energy Council ('AEC') welcomes the opportunity to make a submission to the Climate Change Authority's ('CCA' or 'Authority') consultation on *Setting, Tracking and Achieving Australia's Emissions Reduction Targets* ('Issues Paper').

The Australian Energy Council 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 supports the Climate Change Authority's new powers to independently advise the Commonwealth Government on carbon and climate change policy. This advisory role is important to ensure transparency over Australia's emissions trajectory and give stakeholders an opportunity to inform Australia's carbon targets.

While anyone can set an ambitious target, what is most important is the capabilities of Australia to decarbonise and to do so in the most economically efficient manner. In this respect, it is pleasing to see that the Federal Government is now compelling sectors other than electricity to begin their decarbonisation journey. Policies like the Safeguard Mechanism Reforms and Fuel Efficiency Standard, both of which the AEC support,[1] are critical to achieving the structural economy-wide adjustments needed for Australia to be net-zero by 2050.

It will, however, take some time before the impacts of these reforms are noticeable on Australia's emissions trajectory. Right now, the electricity sector is driving almost all of Australia's actual emissions reductions. The latest Quarterly Update shows electricity emissions to have decreased 21 percent on 2005 levels,[2] with the Government's Emissions Projections expecting this reduction to reach 60 percent by 2030.[3]

These decarbonisation efforts are being driven by accelerated renewable development displacing coal which, most importantly, is being coordinated through the Australian Energy Market Operator (AEMO) and its Integrated System Plan (ISP) and similar in Western Australia. Given there is confidence in the

[1] Australian Energy Council, 'Strengthened Safeguard Mechanism Significant Step', March 2023, https://www.energycouncil.com.au/news/strengthened-safeguard-mechanism-significant-step/; Australian Energy Council, 'Submission to Fuel Efficiency Standard for Australia', May 2023, https://www.energycouncil.com.au/media/brth42xm/20230531-aec-submission-to-fuel-efficiency-standards-consultation.pdf.
[2] Australian Government, 'Quarterly Update of Australia's National Greenhouse Gas Inventory', March 2023, p10.
[3] Australian Government, 'Australia's Emissions Projections 2022', December 2022, p9.

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electricity decarbonisation journey, the AEC is cautious about what value additional sectoral pathway planning or sectoral/technology targets will provide. These views are explained in detail below.

The AEC welcomes the initiation of the National Greenhouse and Energy Reporting Review ('NGER Review') and Carbon Farming Initiative Review ('CFI Review') and is hopeful these Reviews will set the groundwork for a mature and efficient carbon market in Australia, as well as internationally. To reach this endpoint, we consider further and more targeted consultation will be required with industry beyond this Issues Paper.

Setting Australia's 2035 NDC Target

In December 2021, at the time of the Glasgow Conference of the Parties, the AEC announced its support for an economy-wide emissions reduction target of 55 percent by 2035 on 2005 levels.[4] This target was determined primarily as a progress milestone, roughly half-way in time between then and the overarching goal of net-zero by 2050 that the AEC had backed for some time.[5] It would see Australia keep pace with key climate proponents like the European Union, which has it owns "Fit for 55" target. The AEC continues to support 55 by 35 and encourages the CCA to consider this target.

The AEC did not propose a 2030 target, which it considered to be already too near-term to take meaningful actions beyond electricity. Placing additional expectations on electricity emissions seemed unproductive, since its emissions were already forecast to fall at the fastest technically practical rate. The early 2030s, however, promise practical opportunities to make similar progress on emissions in stationary energy and light transport.

The AEC has published a series of research papers that look at the decarbonisation opportunities across Australia's economy,[6] which policymakers may need to leverage to meet future ambition. Promisingly, governments do appear to be moving to take advantage of some of these opportunities:

- The Federal Government's Fuel Efficiency Standard should incentivise EV uptake and hopefully reverse the upwards trajectory of transport emissions, which are otherwise set to be Australia's highest emitting sector by 2030.[7]
- The Federal Government's flagship climate policy, the Safeguard Mechanism Reforms, should compel large emitting industrial facilities to invest in lower emissions technologies.
- State Government policies like Victoria's Gas Substitution Roadmap should incentivise electrification technology uptake to replace gas for residential heating and cooking.

These policies are promising because they set up Australia to achieve structural, economy-wide abatement. But it is also a reality that these policies are in their infancy when it comes to reducing emissions and it is thus unavoidable that electricity will have to play an exaggerated role for Australia to reach its 2030 emissions reduction target. This over-reliance on an extreme rate of transition in one sector is neither efficient nor pragmatic in terms of the exaggerated stresses, both technical and social, that it creates.

[4] Australian Energy Council, 'Australian Energy Council Backs Economy-Wide 55% Emissions Cut by 2035', December 2021.
[5] Australian Energy Council, 'Australian Energy Councils Backs Net Zero Emissions by 2050', June 2020.
[6] Australian Energy Council, 'Australia's Energy Future: 55 by 35 (8 individual papers)', April 2022.
[7] Australian Government, 'Australia's Emissions Projections 2022', December 2022, p9.

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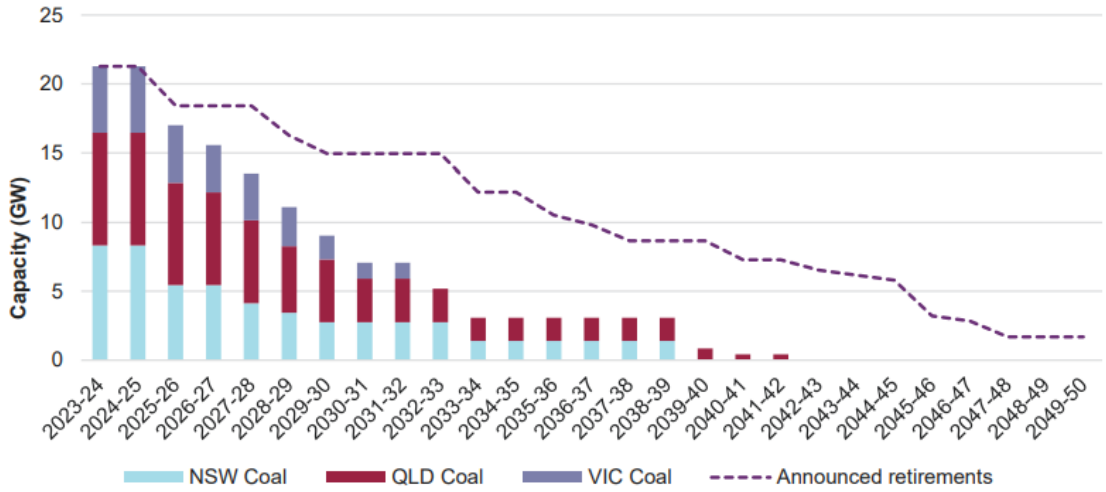
It is also unreasonable for an extreme rate in this one sector to continue after 2030. When recommending its 2035 NDC, the CCA should primarily consider the practically achievable contributions from sectors other than electricity. With electricity expected to achieve an emissions reduction of 60 percent by 2030, placing the burden on electricity to singlehandedly push Australia from 43 percent by 2030 to 55 percent or higher by 2035, is unlikely to be economically efficient or reasonable.

Nevertheless, electricity will continue to play its major role, with the Emissions Projections expecting the sector to reach a 67 percent reduction by 2035 – an estimate that might be conservative given AEMO's coal closure forecasts.

Figure 1: Forecast Coal Retirements, *Step Change* Technology and Regional Outlook



Source: AEMO Integrated System Plan (p50).

But as it gets closer to zero, abatement will become harder and more costly, as well as inviting practical challenges that are explained below. Sectors like transport and stationary energy, which are projected to be the two largest emitters by 2030 respectively, will represent the lowest cost abatement opportunity, so long as the policies mentioned above and their future iterations are appropriately designed.

Electrification will help these two sectors, in particular, decarbonise. Even at current emissions intensity levels, electrification produces lower emissions compared to liquid fuels in transport and gas for space and water heating.[8] This electrification technology is readily available, and the transition will occur rapidly once there is policy in place.

Likewise, biofuels can help decarbonise large and industrial commercial applications and are already starting to play a role in decarbonising transport in other jurisdictions.[9] ARENA's Bioenergy Roadmap looks at the some of the opportunities biofuels can provide and suggests they 'could account for as much as 33 percent of the overall industrial heat demand' given their availability and cost-competitiveness.[10]

[8] Australian Energy Council, 'Australia's Energy Future: Decarbonising Transport', April 2022, p9.
[9] Bioenergy Australia, 'Transitioning Australia's Liquid Fuel Sector: The Role of Renewable Fuels', 2023.
[10] ARENA', Australia's Bioenergy Roadmap', November 2021, p19.

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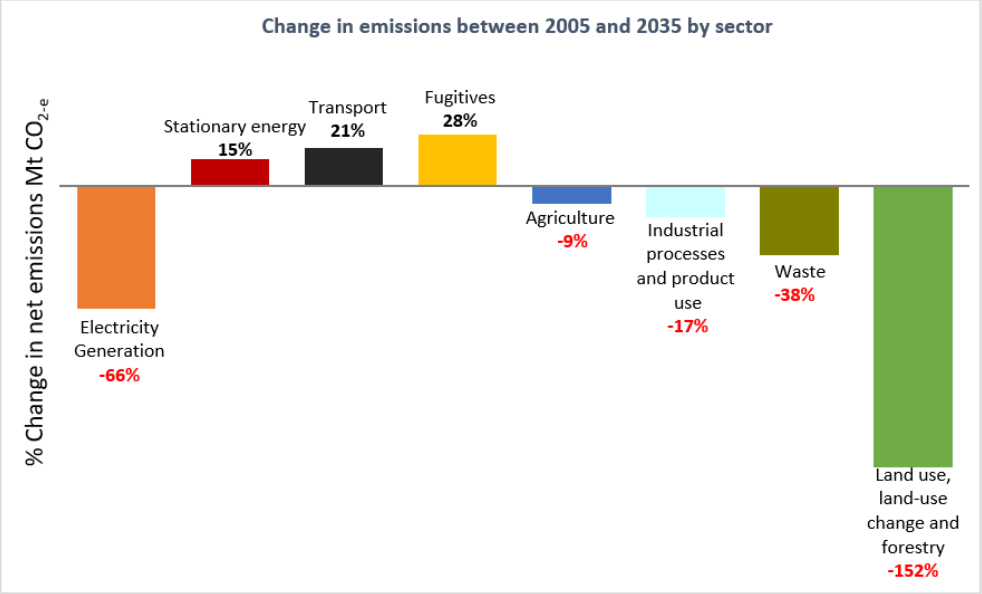
Figure 2: Changes in Emissions Between 2005 and 2035 by Sector



Source: AEC Graph using data from Federal Government's Emissions Projections (p9).

Leading Indicators

With respect to electricity decarbonisation, the CCA will contemplate the rollout of renewable energy in the context of a desire to reach 82 percent nationally by 2030, which implies accelerating deployment two to three times as fast as the previous decade. Although 82 percent should be achieved sometime in the 2030s, the present challenges in achieving it by 2030 do appear overwhelming:

- Supply-chain limitations on the complex equipment required to build and connect large-scale renewables;
- Skill shortages, particularly with respect to electrical networks;
- Land-use resistance to network infrastructure and extended permitting processes;
- Extended design, technical approval and build times for connection assets, stabilization equipment (e.g. synchronous condensers), long-distance transmission and pumped-hydro storage;
- Slow progress in developing the necessary tools to understand the complex phenomena resulting from deep penetration of inverter-based resources on a large electrical grid.

The CCA will hear many messages about these challenges, which are well known, and within which there are no evident opportunities in which the CCA could materially assist. Governments need to face the reality that the timing of the renewable rollout will now be determined by the practical constraints above rather than any desired target or economic incentive.

It is worth the CCA acknowledging this, which would have benefits in:

- Alerting government where targets have become effectively unachievable, such that planning can move to more realistic objectives;
- Cautioning that introducing further economic incentives may be inefficient and ineffectual; and

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- Redirecting focus into sectors where there remain real opportunities to accelerate decarbonisation in the 2020s.

Notwithstanding the above, it seems the CCA intends to accept as given the current government policy of 82 percent national renewable energy in the electricity sector and, on the whole, state-based renewable targets. The AEC recommends against accepting these as fixed inputs.

Firstly, the actual authority of a national 82 percent figure is unclear, with it seeming to be drawn from an output of a NEM-only model of certain policies prior to the 2022 election.[11] AEMO has suggested in its ISP Step Change scenario that 82 percent can be reached by 2030-31, though this is also NEM only.[12] The AEC is unaware of any analysis of the figure's practicality and efficiency as a national target. Secondly, the current supply chain and social licence challenges concern the AEC that such a target may be unachievable at any level of government ambition in only seven years. For these reasons, the AEC recommends the CCA not bind its deliberations to meeting this target. Indeed, the CCA may add value by providing commentary on the practicality of this figure.

With respect to state targets, the AEC recommends considering as inputs the actual policies in place in those states rather than their targets.

Sectoral Pathways

While sectoral pathways can be helpful to give policymakers transparency over the speed of and barriers to decarbonisation in each sector, it does present some challenges for the electricity sector.

The first is resources. In electricity, AEMO models different decarbonisation pathways for the NEM through its ISP. The ISP is released every two years and is the result of substantial stakeholder input and scenario planning. It would not be expected that the CCA could replicate this level of resource commitment, but this ultimately raises questions about what additional value its sectoral pathway would provide.

This leads into the second challenge of duplication. For electricity at least, an additional sectoral pathway will probably only invite confusion and inconsistency, which inadvertently risks undermining the authority of each. The AEC considers then that any electricity sectoral pathway should refer to or significantly draw on AEMO's ISP.

The Authority should also consider how to capture sectoral pathways for those sectors partially dependent on electrification. Some sector advocates are running the misleading argument that electrifying their sector is costly and bad for the environment because the electricity sector is not fully decarbonised. This argument is not correct – as stated earlier, even at current emissions intensity levels, electrification produces lower emissions compared to liquid fuels in transport and gas for space and water heating.[13]

With respect to substituting gas, the Grattan Institute's Getting Off Gas report is highly illustrative of the types of things the Authority should be looking at when setting a sectoral pathway.[14] Arguably most

[11] Reputex, 'The Economic Impact of the ALP's Powering Australia Plan', December 2021, p9.
[12] AEMO, 'Integrated System Plan', June 2022, p45.
[13] Australian Energy Council, 'Australia's Energy Future: Decarbonising Transport', April 2022, p9.
[14] Grattan Institute, 'Getting Off Gas', June 2023.

importantly, to help homes become all-electric, it recommends that governments provide certainty by setting closure dates for the decommissioning of gas networks.

Additional Targets

The Issues Paper has sought feedback on the merits of sectoral and/or technology targets.

Technology targets have been introduced into the electricity sector previously, for example, the Renewable Hydrogen Target in Western Australia. These types of announcements have political appeal because they represent proactivity but tend to be inefficient and create unnecessary costs for businesses and customers. This is because it compels market participants to invest in a technology that is often not the most economically efficient nor the most suitable for what the energy system needs. The AEC prefers a technology-neutral approach with appropriate market signals in place that incentivise private investment.

At least when compared to an economy-wide carbon policy, sectoral targets are problematic for similar reasons. The economics of decarbonisation is not linear and tends to get more expensive the closer a sector gets to 100 percent. This is one reason for the "net" in net-zero – to help smooth these costs. The risk of sectoral targets is that it compels a sector to reach what is ultimately an artificial target regardless of how economically efficient that abatement is. Perversely, this tends to place the most costs on the sectors already decarbonising, because they are more likely to have exhausted the lower cost abatement options.

Furthermore, these targets often imply that the only barrier to uptake is overall will. To use the example from the Issues Paper, the Commonwealth Government's 82 percent renewable energy target, investment appetite in renewable energy is not the barrier. The main barriers relate to supply chain, infrastructure construction, and planning and approvals. It could be argued that a renewable target creates pressure to resolve these barriers, but what is more likely are rushed processes that lead to a more costly and less coordinated electricity grid.

For the electricity sector, sectoral targets seem unlikely to incentivise abatement beyond what is already occurring. The recent NSW Climate Change Policy and Action Plan recognised as such, opting against sectoral targets for the electricity sector because it considered it better policy to 'focus on those sectors where there is no explicit policy in place to reduce emissions, and where there are still significant opportunities for [the policymaker] to both influence and require emission reductions'.[15]

Supporting Affected Communities

The AEC recently published a report that looked at what Australia can do to ensure a just climate and energy transition.[16] Drawing on past domestic and international experiences, the report highlighted that there is no silver bullet approach to supporting affected communities. What is needed rather is a whole-of-society effort that is tailored to the individual circumstances of a community.

With the Federal Government's recent announcement of a Net Zero Authority, the AEC considers Australia to be on the right trajectory towards having a whole-of-society focus. The Net Zero Authority will provide some national coordination to existing state and regional efforts. These efforts can be seen through state

[15] NSW EPA, 'Climate Change Policy and Action Plan 2023-2026', January 2023', p37.

[16] Strategen, 'Just Transition: Navigating Australia's Energy Transition', November 2022.

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policies like the Queensland Government's Jobs Security Guarantee, and active regional bodies like the Latrobe Valley Authority.

Supplementing all this are industry efforts to ensure future pathways and opportunities for workers at coal-fired power stations. For example, there were no forced redundancies following the closure of the Liddell Power Station, with AGL workers either offered new work opportunities or electing retirement.[17] Likewise, Energy Australia have already put programs in place to provide transition support to their workers once Yallourn Power Station closes in mid-2028.[18]

Views on NGER Scheme

To help promote greater biomethane use, biofuels should be included in the NGERs using a market "book and claim" approach rather than the physical approach. A market approach would effectively work via the surrender of Guarantee of Origin certificates or an equivalent mechanism and then adding back the abatement to effectively "gross up" the network blending proportion, avoiding any double counting when claimed by other facilities.

This approach provides better incentives for investment in biofuels, which is particularly important for large, industrial facilities under the Safeguard Mechanism looking for cost-competitive ways to decarbonise.

Carbon Credit Integrity – Implementation of ACCU Buffer

When making its recommendation for a scheme-level buffer, the Chubb Review cautioned that the idea 'warrants further consideration because, for example, it may risk upward pressure on the ACCU price, with implications for the cost-effectiveness of abatement'. The Federal Government agreed with this assessment in its Implementation Plan and deferred consideration to the Authority through its CFI Review.

Right now, it seems too early to confidently determine the right mechanisms of an ACCU buffer, noting that some conservatism is already built into ACCU projects. There is a 5 percent risk reversal buffer to all sequestration projects and a further 20 percent for human induced regeneration with a 25-year permanence period. The implementation of the other Chubb recommendations, which the Government has committed to, is expected to further tighten project criteria.

If the CCA does determine an integrity buffer is necessary, the AEC's view is that it should:

- Be considered at a methodology level rather than scheme wide.
- Not be applied retrospectively.
- Avoid distorting the price signal for one tonne of abatement.
- Not inhibit the fungibility of ACCUs or the liquidity of ACCUs as a commodity market.
- Not impose additional burdens or complexity on market participants, unless there are good reasons.

The Authority and stakeholders should have a better view on the mechanisms of an ACCU buffer once the full suite of Chubb recommendations are implemented. For this reason and the obvious importance of integrity to the durability of Australia's carbon market, the AEC believes further and more targeted

[17] AGL, 'AGL's Liddell Power Station Closes After 52 Years of Operation', April 2023.

[18] Energy Australia, 'Energy Australia Helps Yallourn Workers Prepare For Life After Coal', November 2022.

consultation on this reform will be needed. That might involve, for example, the Authority releasing a Proposal Paper on the ACCU buffer design and any other material changes to the CFI.

Use of International Units

The AEC is comfortable with allowing the limited use of international units for compliance, so long as:

- They are of comparable environment integrity to Australian credits.
- There is high certainty about their additionality.
- They complement, not replace, a robust market for domestic offsets.
- Their quantity is limited and do not delay efforts to achieve actual or structural abatement across Australia's economy. Limitations on quantity are especially important if offsets are to remain unlimited for industrial facilities with Safeguard obligations.

This reform can help Australia better participate in international carbon markets, in particularly its leadership commitment to the Indo-Pacific Carbon Offsets Scheme. However, the exchange of offsets does bring some reputational risks to Australia if negative perceptions around the quality of ACCUs become louder. The AEC considers the Chubb Review to have addressed previous concerns but notes some stakeholders do not share that view. It will be important to manage these perceptions when exchanging offsets internationally, so to avoid a race to the bottom.

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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