



Australian Government
**Australian Renewable
Energy Agency**

ARENA

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30 June 2023

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ARENA submission on setting, tracking and achieving Australia's emissions reduction targets

We are pleased to offer ARENA's perspective on the topic of setting, tracking and achieving Australia's emissions reduction targets. We have focussed our submission on three of the nine cross-cutting issues identified in the Issues Paper but we would be happy to expand on these or to discuss other issues if it would be valuable for this process.

ARENA's purpose is to support the global transition to net zero emissions by accelerating the pace of pre-commercial innovation, to the benefit of Australian consumers, businesses and workers. To help achieve this purpose, ARENA actively shares the knowledge and insights it gains from the projects it funds to aid energy policy reform.

Consequently, ARENA supports the associated actions being undertaken to achieve Australia's emission reduction targets and offers the following perspectives on three of the cross-cutting issues raised in the Issues Paper.

1. Sectoral Pathways

ARENA has recently been involved in some sectoral approaches to decarbonisation through two flagship projects:

- a) [Australian Industry Pathways to Industrial Decarbonisation](#) – a comprehensive project delivered over three phases by ClimateWorks and Monash University who recruited and facilitated a large group of industry stakeholders; and
- b) [Roadmap to decarbonize Australia's Alumina sector](#) – this report documents a process involving Alcoa, Rio Tinto and South32 to openly discuss possible pathways for their industry sector. It considers the technical and other implications for emerging low emissions alumina refining and identifies key pathways to emissions reduction for one of Australia's hard to abate industries.



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A common high-level outcome from both these projects was the value of taking a sectoral approach to these difficult decarbonisation discussions. In both cases, it was clear the main industry players, including some of Australia's largest companies and largest carbon emitters, appreciated the opportunity to be involved in such planning.

The significant volume of experience, documented outputs and relationships developed through these projects may be useful for CCA's process. ARENA is happy to facilitate access to these and discuss them further, if required.

2. Contributions beyond Australia's borders

ARENA's mandate is focussed on accelerating the transition to sustainable energy in Australia. However, many of the projects, technologies and learnings will be relevant and potentially useful to help the energy transition of other countries.

A fundamental part of ARENA's impact is our focus on Knowledge Sharing, which involves extracting relevant learnings from the projects that we help fund and ensuring those learnings are communicated effectively to the stakeholders that need them to help accelerate the transition. We currently do not have the resources required to cater for international stakeholders. However, the [ARENA Knowledge Bank](#) is a free public online database of every project that ARENA has supported. This could be an efficient way to provide access to stakeholders from other countries because it contains full project details, including proponent contacts, as well as copies of deliverables for download.

A common challenge facing many countries is how to increase the penetration of renewable electricity in existing grids while maintaining grid performance, stability and affordability. This is an area in which Australia has some world-leading experience, particularly around the use of battery energy systems and advanced inverters to help stabilise the grid in the absence of large synchronous generators (eg: coal, gas or diesel power generators).

3. Suitability of 'Kyoto-era Schemes' and credibility of carbon credit schemes

Market-based schemes like the Emissions Reduction Fund (ERF) can offer significant benefits to accelerate commercialisation of technologies and markets that are needed for the energy transition. Such schemes can be a good complement for areas in which ARENA funding has already helped demonstrate the viability of a particular technology.

An example could be the use of heat pumps for providing industrial heat to replace conventional natural gas fired steam boilers. ARENA has previously funded projects to investigate and demonstrate the technical and financial benefits of this technology in a variety of industry sectors. This has helped reduce the perceived risk in a new technology but is unlikely to trigger rapid market transformation in isolation. However, if a market-based mechanism like the ERF were to introduce an appropriate methodology to calculate and claim the emissions savings from the deployment of this technology, then this could provide an effective incentive to project developers, suppliers and end-users to invest in technology upgrades.



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There are similar programs in Australia that have been highly successful in achieving market transformation and emissions reductions related to specific technologies. Two examples are the [Energy Savings Scheme](#) in NSW and its equivalent program in Victoria. Both these programs have been shown to have achieved relatively low costs of abatement and triggered significant private investment and operating cost savings.

About ARENA

The Australian Renewable Energy Agency (ARENA) was established in 2012 by the Australian Government. ARENA's function and objectives are set out in the Australian Renewable Energy Agency Act 2011.

ARENA provides financial assistance to support innovation and the commercialisation of renewable energy and enabling technologies by helping to overcome technical and commercial barriers. A key part of ARENA's role is to collect, store and disseminate knowledge gained from the projects and activities it supports for use by the wider industry and Australia's energy market institutions.

ARENA welcomes the opportunity to support this process. Please contact Greg Williams, Principal Policy Advisor (greg.williams@arena.gov.au) if you would like to discuss any aspect of ARENA's submission.

Yours sincerely,

Rachele Williams

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