DEEP DECARBONIZATION PATHWAYS

CLIMATE AMBITION BEYOND EMISSION NUMBERS

Taking stock of progress by looking inside countries and sectors

AUSTRALIA

Emma Peterson, Anna Malos, Meg Argyriou, Anita Foerster

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IDDRI ClimateWorks AUSTRALIA MONASH University

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Contact

Henri Waisman, henri.waisman@iddri.org

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Emma Peterson, Anna Malos, and Meg Argyriou, ClimateWorks Australia and Anita Foerster, Monash University.
With thanks to additional colleagues at ClimateWorks Australia for insightful contributions.

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Disclaimer

The results presented in this report are outputs of the academic research conducted under the DDP BIICS project as per the contractual agreement. The academic work does not in any way represent our considered opinion for climate negotiations and also does not reflect the official policy or position of the Government of Australia.

How is this document relevant to the Global Stocktake?

This document is part of a collective report that assesses the evolution of climate ambition in 26 countries and 3 hard-to-abate sectors through a granular and context-specific analysis of trends and progress of national and sectoral transformations.[1] This approach allows identifying what hinders and spurs action in countries and sectors, and understanding the conditions that can support enhanced ambition, which could be political, social, economic, governance.

These insights are directly relevant to four overarching functions of the Global Stocktake in support of its desired outcome, i.e. "to inform Parties in updating and enhancing, in a nationally determined manner, their actions and support in accordance with the provisions of the Paris Agreement, as well as enhancing international cooperation for climate action" (Article 14.3 of the Paris Agreement):

- Create the conditions for an open and constructive conversation on global cooperation (on e.g., technology, trade, finance, etc.), based on an in-depth understanding of the international enablers of enhanced country ambition.
- Organize a process for knowledge sharing and collective learning, based on concrete examples of actions already in place or being discussed, including best practices.
- Create space for open dialogues across different stakeholders to support better coordination of actions, based on a detailed understanding of the levers to be activated to enhance ambition in national and sectoral transitions
- Facilitate ownership by decision-makers of the climate challenge and the risks and opportunities of the low-emission and resilient transition, based on context-specific and granular analysis of barriers and enablers.

More specifically, the collective report in general – and this document in particular – can contribute to address some of the key guiding questions for the Global Stocktake[2], notably:

- What actions have been taken to increase the ability to adapt to the adverse impacts of climate change and foster the climate resilience of people, livelihoods, and ecosystem? To what extent have national adaptation plans and related efforts contributed to these actions (Decision 19/CMA.1, paragraph 36(c))?
- How adequate and effective are current adaptation efforts and support provided for adaptation (Article 7.14 (c) Paris Agreement)?

1 The full report « Climate ambition beyond emission numbers - Taking stock of progress by looking inside countries and sectors" can be found at: https://www.iddri.org/en/publications-and-events/report/climate-ambition-beyond-emission-numbers-taking-stock-progress

2 Draft Guiding Questions for the Technical Assessment of GST1 (version 20th October 2021), available at: https://unfccc.int/sites/default/files/resource/Draft%20GST1_TA%20Guiding%20Questions.pdf

- What are the barriers and challenges, including finance, technology development and transfer and capacity-building gaps, faced by developing countries?
- What is the collective progress made towards achieving the long-term vision on the importance of fully realizing technology development and transfer in order to improve resilience to climate change and to reduce greenhouse gas emissions referred in Article 10.1 of the Paris Agreement? What is the state of cooperative action on technology development and transfer?
- What progress been made on enhancing the capacity of developing country Parties to implement the Paris Agreement (Article 11.3 Paris Agreement)?
- To achieve the purpose and long-term goals of the Paris Agreement (mitigation, adaptation, and finance flows and means of implementation, as well as loss and damage, response measures), in the light of equity and the best available science, taking into account the contextual matters in the preambular paragraphs of the Paris Agreement:
  - What are the good practices, barriers and challenges for enhanced action?
  - What is needed to make finance flows consistent with a pathway towards low GHG emissions and climate-resilient development?
  - What are the needs of developing countries related to the ambitious implementation of the Paris Agreement?
- What is needed to enhance national level action and support, as well as to enhance international cooperation for climate action, including in the short term?
- What is the collective progress made by non-Party stakeholders, including indigenous peoples and local communities, to achieve the purpose and long-term goals of the Paris Agreement, and what are the impacts, good practices, potential opportunities, barriers and challenges (Decision 19/CMA.1, paras 36(g) and 37(i))?

Foreword

Henri Waisman, Marta Torres Gunfaus, Anna Perez Catala, IDDRI.

Country commitments as reflected in enhanced Nationally Determined Contributions submitted to the UNFCCC are insufficient to put the world on track to achieve the collective objective of the Paris Agreement to hold temperature increase below 2 °C or 1.5 °C above pre-industrial levels. Furthermore, concrete policies and actions adopted by countries on the ground are often not sufficient to achieve these NDC targets. These conclusions highlight the need to increase ambition and to provide convincing evidence to accelerate action in the immediate and short term to give effect to this ambition. Yet these assessments are not sufficient to effectively guide the progressive increase of ambition, as organized by the cyclical process of the Paris Agreement.

APPROACH

With this imperative in mind, this report adopts a different, complementary, perspective on climate ambition. It seeks to open the box of emission pathways, by considering multiple dimensions of the conditions that will make these pathways possible. These are technical, economic, political, social and governance considerations in need of attention to enable the required far-reaching and systemic transformation towards the long-term goal. On the one hand, the revision of emission targets needs to be directed by an assessment of how drivers of emissions should change to trigger transformation. On the other hand, converting emissions' targets into pertinent concrete implementation requires well-designed policy packages and investment plans that are also informed by a clear and detailed understanding of the starting point, priorities and interplays between the available levers of transformation.

This bottom-up assessment aims at contributing to the process of collective learning in support of the progressive increase of collective ambition, as inserted at the core of the Paris Agreement paradigm. Approaching climate ambition through the lens of underlying transformations calls for reflecting the heterogeneous nature and the multi-faceted aspects of transitions in different sectors and countries. This forces a move away from a purely global perspective and adopts a more granular approach based on country and individual sector perspectives. Thus, the report explores trends and progress on these transformations, as locally observed over the past years, notably since the Paris Agreement. This 'backwards looking' approach can help identify where developments are going in the right direction, where they should be accelerated and where major tensions remain that should be addressed as a priority to avoid undermining the transition. The picture of the state of the ambition discussion, firmly embedded in the country and sectoral realities, can provide means for reflection and action within the international climate community, particularly to inform focus areas for advancing the collective ambition agenda.

STRUCTURE OF THE REPORT

This country report describes the recent evolutions of domestic discourses on climate ambition, national climate policy, national governance and concrete policies and actions with a significant effect on GHG emissions. The chapter highlights a selection of striking and structurally important elements to advance the transformation towards carbon neutrality from an in-country perspective.

This report is part of a full series of 26 country chapters and three sectoral chapters. The full report includes a "summary for decision-makers" to present 10 cross-cutting messages emerging from the country and sector analysis, as a guide to the selection of priorities for collective action in the post-COP26 period.

You will find the full report at: https://www.iddri.org/sites/default/files/PDF/Publications/Catalogue%20Iddri/Rapport/DDP_beyond%20emissions%20report.pdf

AUSTRALIA

A NARRATIVE OF CLIMATE AMBITION

This chapter has been written thanks to the support of the International Climate Initiative (IKI) of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU).

INTRODUCTION

Positive action by the states and private sector is driving momentum towards net zero even without national climate leadership.

Australia's per capita carbon dioxide emissions are among the highest in the world, driven by a highly energy-intensive, export-oriented economy[1]. This has seen climate action framed as a choice between jobs and the environment, hampering commitment at the national level.

Australia is yet to set a long term emissions reduction target of net zero and its interim target for 2030 is considered to be inconsistent[2] with the temperature goal of the Paris Agreement. Australia regularly ranks amongst the world's worst performers for climate action[3]. Legislation and institutions exist at the federal level that could be used to increase national ambition however the federal Government has not supported an increase to Australia's targets nor committed to a net zero target, despite significant pressure.

1 https://climateanalytics.org/latest/australia-on-track-to-become-one-of-the-worlds-major-climate-polluters/
2 https://climateactiontracker.org/countries/australia/
3 https://dashboards.sdgindex.org/downloads

In the past five years, public discourse on climate has greatly increased, and calls for national action are coming from the community, the private sector, and internationally. Community sentiment is in large part driven by the lived experience of climate change impacts by Australians, notably the Black Summer bushfires of 2019/2020, coupled with severe droughts and floods.

Australia is due a federal election by mid-2022, and although unlikely this could be before COP 26. This has the potential to be a pivotal election for climate action, with increased ambition expected if either there were a change of party, or if a significantly greater majority for the current Coalition government meant that it could navigate internal divisions on this issue[4].

DOMESTIC DISCOURSE

Increased private sector accountability and renewed public awareness coupled with international trade pressures are shaping action at the state level, even as federal political division hinders national efforts.

There is distinct polarisation[5] on climate change issues between the two major political parties at the federal level. Historically, the Coalition of the Liberal and National Parties (centre-right/conservative) demonstrate less action than the Labor Party (centre left) although both parties face pressure to resist climate action from voters in resource-dependent rural communities. The Coalition Government has been in power for the last seven years, and has so far refused to increase Australia's 2030 target or set a long-term net zero target. In fact, efforts from within the government to increase climate action have contributed to leadership change. Since 2015, Labor Party has a commitment to a net zero by 2050 goal and has said they will announce the policies to reach that target before the next election.

The polarisation that exists at the federal and territory level is notably less pronounced at the state level. Even with a wide range of governing political parties or coalitions at the state and territory level, all have set net zero by 2050 targets (or earlier). For example, New South Wales, Tasmania, and South Australia all have Liberal or Coalition governments and have emission reduction and renewable energy policies that are significantly more ambitious than those at the federal level.

The shifting international context for Australia is another critical factor. At the end of 2020, three of Australia's key trade partners - China, South Korea, and Japan - all set mid-century net zero targets. Together, these countries buy 75% of Australia's exported thermal coal used in power generation and 87% of its liquefied natural gas[6]. While the medium and long term implications of this appear clear for Australia's fossil fuel exports, Australia is yet to actively adjust its economic focus.

The response to the COVID pandemic has heightened discussion about opportunities to pair economic recovery with climate ambition, although economic setbacks have been less severe than in other parts of the world. The Federal Government has focussed on protecting incomes for individuals and businesses while largely ignored the significant potential benefit[7] of green stimulus. The Government has instead backed a 'gas-fired recovery'[8], despite recommendations by the International Energy Agency that there can be no new oil and gas fields in a Paris-aligned global pathway. Conversely, at the sub-national level, some spending has been focussed on 'green recovery' and climate action is increasingly being framed in terms of economic growth and job creation. Examples include the recent Victorian Climate Change Strategy[9] and NSW's Net Zero Industry and Innovation Program[10], which both focus action on investments in emissions reduction that have strong economic and job-creation potential.

The Australian corporate sector is also stepping up with net zero targets becoming normalised in

4 The Coalition currently has a majority of one.

5 https://www.cambridge.org/core/journals/transnational-environmental-law/article/abs/australian-energy-transition-as-a-federalism-challenge-uncooperative-energy-federalism/FBB1D83EA9A4B3730607CFCF6555652C

6 https://www.industry.gov.au/data-and-publications/resources-and-energy-quarterly

7 https://www.climateworksaustralia.org/resource/prudent-investments-to-boost-the-economy-and-lower-emissions/

8 https://www.pm.gov.au/media/gas-fired-recovery

9 https://www.climatechange.vic.gov.au/victorias-climate-change-strategy

10 https://energysaver.nsw.gov.au/sites/default/files/2021-03/NetZero-Industry-Innovation-Program_FINAL_24-March-21_webaccessible.pdf

the past few years, despite weak national policy. This shift reflects growing expectations around corporate climate risk management from investors and lenders, driven by tightening corporate law and financial regulation frameworks[11] (including the adoption of recommendations by the Task Force for Climate-Related Disclosures) and increased litigation risk. Investor and public scrutiny is shifting to expect short- to medium-term commitments in addition to long-term mid-century net zero targets. A significant portion of Australia's private capital is now shaped by climate targets. Several major Australian pension investment funds recently set net zero by 2050 targets across their entire portfolios. Many investors and lenders, including Australia's biggest four banks, have targets to divest from thermal coal by 2030.

Public opinion is in favour of stronger government action on climate change. Following the 2019/2020 bushfires, a poll[12] found 72% of Australians viewed the fires as a wakeup call on the impacts of climate changeand recent polling revealed two thirds of voters think the government should be doing more to address climate change[13] with many seeing this as the most important issue at the next election. This support is also evidenced by the hundreds of thousands of Australians[14] who attended the 2019 school strike for climate rallies, and a shift in media rhetoric and attention on the issue.

NATIONAL GOVERNANCE

While Australia has some strong institutional capability, federal climate action is insufficient.

Australia is a federation of six states and two self-governing territories, which have their own constitutions, parliaments, governments and laws. At the federal level, there is currently no climate change framework legislation in place. Australia had a comprehensive climate and energy policy between 2012 and 2014, including a carbon price and a comprehensive suite of measures to distribute funds raised through carbon pricing to those most affected by it. The package was partly repealed in 2014 following a federal election and change in government.

A national framework climate law, similar to those now in place in comparable jurisdictions like the United Kingdom, would serve an important purpose in Australia. Indeed, a private Members bill has been recently proposed[15], although it does not currently have government support.

Of the states and territories, only Victoria and the Australian Capital Territory have enacted climate change framework legislation with targets aligned with the temperature goals of the Paris Agreement. South Australia and Tasmania have climate change legislation but their public commitments are now beyond their legislated ones.

A number of national institutions were established a package of climate and energy legislation in 2011[16], and despite partial repeal, several still play significant roles in the context of Australian climate ambition. The Climate Change Authority[17], originally a key pillar of national climate change action and progress tracking currently has little influence on national policy, although could be reinvigorated. The Clean Energy Finance Corporation (Australia's green bank) facilitates private finance[18] into the clean energy sector by improving bankability of clean energy projects, and is highly regarded internationally. It is relatively insulated from the politically dynamic context, due in large part to the return on investment it continues to achieve[19]. The Australian Renewable Energy Agency[20] has supported more than 500 projects in early stage project

11 Anita Foerster, Kym Sheehan, Daniel Parris, 'Investing for a Safe Climate?' 44(4) (2021) University of New South Wales Law Journal (forthcoming) and Jacqueline Peel, Brett McDonnell, Hari Osofksy, Anita Foerster, Rebekkah Markey-Towler (2020) Corporate Energy Transition: Legal Tools for Shifting Companies Towards Clean Energy Practices (University of Melbourne).

12 https://australiainstitute.org.au/wp-content/uploads/2020/12/Polling-January-2020-Climate-change-concern-and-attitude-Web.pdf

13 https://www.theage.com.au/environment/climate-change/australia-s-biggest-climate-poll-shows-support-for-action-in-every-seat-20210829-p58mwb.html

14 https://www.abc.net.au/news/2019-09-20/school-strike-for-climate-draws-thousands-to-australian-rallies/11531612

15 https://www.aph.gov.au/Parliamentary_Business/Bills_Legislation/Bills_Search_Results/Result?bId=r6618#:~:text=Introduced%20with%20the%20Climate%20Change,Clean%20Energy%20Regulator%20Act%202011%2C

16 Australian Panel of Experts on Environmental Law, Climate Law (Technical Paper 5, 2017)

17 https://www.climatechangeauthority.gov.au/

18 https://www.cefc.com.au/media/media-release/cefc-welcomes-publication-of-the-independent-statutory-review-of-its-operations/

19 https://www.cefc.com.au/media/media-release/cefc-2019-20-investment-update/

20 https://arena.gov.au/about/

development and technology commercialisation and has recently had its funding extended. The current Federal Government is working to broaden the mandate of these organisations to include lower-emissions technologies and allow investment in hydrogen made from gas and CCS.

The Clean Energy Regulator manages the Emissions Reduction Fund, Renewable Energy Target (achieved in 2020, and not expanded) and the National Greenhouse and Energy Reporting scheme. Through these, Australia has sound data on emissions and energy use by entities across a substantial proportion of the Australian economy potentially providing a strong foundation for good policy if the political direction were to change.

Australia's economy is currently dominated by energy and emissions-intensive exports. While the federal government is supportive of diversification into clean energy, there is no drive to transition from other energy export markets.

The export of carbon-intensive resources is a substantial part of the Australian economy[21]. Australia's exported fossil fuel CO_2 potential is more than double Australia's total domestic emissions[22]. In contrast, Australia has some of the best renewable energy resources in the world, which could position Australia as a significant net exporter of clean energy - either converted into green hydrogen for export or perhaps directly to countries via undersea transmission cables.

Similarly, Australia has abundant reserves of minerals critical to low-carbon technologies such as lithium, cobalt and rare earth elements offering a key export growth opportunity for Australia over coming decades.

Through these resources, Australia could keep its global role in exporting energy resources - but be a force for decarbonization rather than the current position of supplying the fossil fuels that create emissions.

However, without complementary Australian energy and industrial decarbonization policies, expanding hydrogen and mineral sectors won't necessarily reduce emissions in Australia, and may even increase them. Fortunately, policies focussed on encouraging low-emissions technologies tend to have bipartisan political support.

ACTIONS AND POLICIES

Australian climate change policy and action needs significant strengthening, particularly at the federal level to align with Paris temperature goals.

Australia is a signatory to the Paris Agreement and the Federal Government has committed to an emissions reduction target of 26-28% on 2005 levels by 2030. Australia is not yet on track[23] to meet this target although government projections suggest that existing climate policy - including the Emissions Reduction Fund and the Technology Investment Roadmap may right this course. The Federal Government has signalled its intent to reverse its previous negotiating position that it would use Kyoto 'carry-over credits' to meet any shortfall. The use of these credits is strongly opposed by most UNFCCC parties and may not be accepted within the Paris Agreement.

There is no federal commitment as yet to a net zero emissions timeline, with the government position strongly in favour of 'technology, not taxes'. The key national policies include: Australia's Technology Investment Roadmap[24]; the Emissions Reduction Fund (a voluntary reverse auction process where businesses can earn Australian Carbon Credit Units that can either be sold to the Australian Government or in the secondary carbon market); and the Safeguard Mechanism (explained in more detail later). The Federal Government has indicated they will release Australia's long-term emissions reduction strategy before COP26, which is likely to be focussed on support for technologies.

Continuing the distinction between Australia's federal and state governments, not only have the Australian States and Territories set goals of net zero emissions by 2050 or earlier, most also have 2030 targets stronger than the national one. However, no

21 https://climateanalytics.org/latest/australia-on-track-to-become-one-of-the-worlds-major-climate-polluters/ -

22 https://www.aph.gov.au/DocumentStore.ashx?id=b1bb0f89-fd83-4848-9680-8dbc9469f5a4&subId=680320

23 https://www.industry.gov.au/news/projecting-australias-emissions-2020-report

24 https://www.industry.gov.au/data-and-publications/technology-investment-roadmap-first-low-emissions-technology-statement-2020

jurisdiction has systematically or comprehensively addressed how all government decision-making should achieve their targets.

There have been recent gains in other cross-economy policy areas, as well as room for further action. The advances include state government spending policies considering integration of net zero in government finance and investment and several recent state budgets highlight climate change as a focus. Infrastructure policy is showing some progress and several states are considering how to align procurement policies with climate change objectives. However so far, no jurisdiction has effectively incorporated the transition to a global net zero economy into their export policies and programs.

Analysis of climate policies at the sectoral level continues to highlight the differences between federal action and stronger state ambition, although increased commitment is needed at all levels.

Energy

The divide between federal and state policies can be clearly seen in the energy sector - most states and territories have strong targets and policies in renewable energy. However, the efficiency of meeting these is compromised by the lack of supportive federal policy. Australia has the highest global uptake of solar PV, almost eight times the worldwide average, and one in four homes have solar panels on their roof[25].

There is no federal plan to phase out coal, nor are there any state targets for early retirement of fossil fuel generation from the grid. Likewise, there are no federal or state plans to prevent further expansion of coal mining (in fact there is active support for the establishment of new mines) and states with gas resources are approving new extraction projects.

In recent years, there have been numerous processes to ensure the grid-connected electricity systems and markets respond to the rapid expansion of renewable energy - supported by large-scale investment in transmission and storage projects at the federal[26] and state level. The Finkel review into the Future Security of the National Electricity Market[27], the Australian Energy Market Operator's Integrated System Plans[28], as well as market design reviews, are focussed on security and reliability of electricity. However, the last proposed policy to include a joint focus on lowering emissions (the National Energy Guarantee, proposed by the Finkel review in 2017) was not taken forward by the Coalition government.

Energy Efficiency and Productivity

Australia lags behind much of the developed world in terms of energy efficiency[29] even though this policy area has reasonably solid bipartisan support. The Coalition Government introduced the National Energy Productivity Plan[30], in 2015, which aims to improve energy productivity by 40 per cent between 2015 and 2030 although implementation of the plan has been slow. The Emissions Reduction Fund includes opportunities for projects with a number of energy efficiency outcomes to earn Australia Carbon Credit Units. The National Construction Code, implemented by all states and territories, plays an important role in building energy efficiency, and is guided by a trajectory towards 'zero energy (and carbon) ready buildings'[31]. ClimateWorks Australia research[32] suggests that this outcome requires a substantial reduction in use of natural gas in buildings, although few states and territories have any policies to incentivise electrification or a pathway to transition away from gas.

25 https://www.csiro.au/en/news/news-releases/2021/australia-installs-record-breaking-number-of-rooftop-solar-panels

26 https://www.energy.gov.au/government-priorities/energy-supply/delivering-priority-transmission-projects

27 https://www.energy.gov.au/government-priorities/energy-markets/independent-review-future-security-national-electricity-market

28 https://aemo.com.au/energy-systems/major-publications/integrated-system-plan-isp

29 https://www.eec.org.au/news/eec-news/article/australia-ranks-worst-for-energy-efficiency-in-developed-world#:~:text=Australia%20ranks%20worst%20for%20energy%20efficiency%20in%20developed%20world%2027%20June%202018&text=The%20American%20Council%20for%20an,position%20in%20the%202016%20ranking

30 https://www.energy.gov.au/government-priorities/energy-productivity-and-energy-efficiency/national-energy-productivity-plan

31 https://consultation.abcb.gov.au/engagement/energy-efficiency-scoping-study-2019/supporting_documents/Trajectory%20for%20Low%20Energy%20Buildings.pdf

32 https://www.climateworksaustralia.org/wp-content/uploads/2020/04/Decarbonization-Futures-March-2020-full-report-.pdf

In several states, retailer energy efficiency schemes require large energy retailers to help households and businesses save energy and reduce emissions (some via white certificates). These schemes are not yet unlocking the full range of energy efficiency opportunities.

Transport sector

Transport is one of the greatest challenges for Australia, with emissions currently increasing. Individual vehicles are seen as the preferred way to travel and most states and territories have overwhelmingly allocated funds to expanding road networks, rather than mode shifting and public transport.

Up until early 2021, there were no national transport-specific emissions reduction policies[33] and Australia is the only OECD economy without vehicle CO_2 emissions standards[34]. Electric vehicle policy is thin on the ground with the federal Future Fuels Strategy[35] discussion paper notably silent on policies to make electric vehicles (EVs) more affordable or a phase-out date for the sale of new fossil fuel cars. States and territories have rolled out charging infrastructure, and some have set electric vehicle uptake targets, although only recently accompanied by incentives.

Industry

Increases in industrial emissions have been dominated by the mining, oil and gas sector. Emissions have increased rapidly in recent years as a result of the swift expansion in liquefied natural gas (LNG) production for export. The primary federal policy for managing industry emissions is the Safeguard Mechanism which is not designed to reduce emissions or cap them in absolute terms and has failed to incentivise the meaningful industrial emissions reductions needed to align to net zero by 2050.

In 2017 CSIRO (Australia's national science agency) released the Low Emissions Technology Roadmap[36] which outlined energy and industrial options that if taken would be of benefit to Australia in the transition to low emissions energy. In addition to funding that supports action under the Roadmap domestically, the federal government recently announced partnerships with other countries to co-fund research and demonstration projects, as well as facilitating deployment and export of Australian low-emissions technologies and energy[37].

Land and Agriculture

The Emission Reduction Fund is currently the primary federal policy incentive for emissions reduction in land and agriculture. This fund provides Australian Carbon Credit Units to projects that undertake activities to reduce emissions or enhance carbon storage and government purchasing of the credit units is being used to help meet Australia's 2030 target. Land clearance remains a substantial issue in many states and territories and actions to reduce agriculture emissions are at very early stages.

33 https://www.climatechangeauthority.gov.au/sites/default/files/2020-09/Prospering%20in%20a%20low-emissions%20world.pdf

34 https://jetcharge.com.au/blog/fuel-efficiency-emissions-standards-australia#:~:text=Despite%20our%20national%20commitment%20to,country%20without%20fuel%20efficiency%20standards.&text=On%20a%20grams%2Dof%2DCO_2,50%25%20more%20than%20Japanese%20equivalents.

35 https://consult.industry.gov.au/climate-change/future-fuels-strategy/

36 https://www.csiro.au/en/work-with-us/services/consultancy-strategic-advice-services/csiro-futures/futures-reports/low-emissions-technology-roadmap

37 https://www.industry.gov.au/news/international-partnerships-to-accelerate-low-emissions-technology

The DDP is an initiative of the Institute for Sustainable Development and International Relations (IDDRI). It aims to demonstrate how countries can transform their economies by 2050 to achieve global net zero emissions and national development priorities, consistently with the Paris Agreement.. The DDP initiative is a collaboration of leading research teams currently covering 36 countries. It originated as the Deep Decarbonization Pathways Project (DDPP), which analysed the deep decarbonization of energy systems in 16 countries prior to COP21 (deepdecarbonization.org). Analyses are carried out at the national scale, by national research teams. These analyses adopt a long-term time horizon to 2050 to reveal the necessary short-term conditions and actions to reach carbon neutrality in national contexts. They help governments and non-state actors make choices and contribute to in-country expertise and international scientific knowledge. The aim is to help governments and non-state actors make choices that put economies and societies on track to reach a carbon neutral world by the second half of the century. Finally, national research teams openly share their methods, modelling tools, data and the results of their analyses to share knowledge between partners in a very collaborative manner and to facilitate engagement with sectoral experts and decision-makers.
www.ddpinitiative.org

The Institute for Sustainable Development and International Relations (IDDRI) is an independent, not-for-profit policy research institute based in Paris. Its objective is to identify the conditions and propose tools to put sustainable development at the heart of international relations and public and private policies. IDDRI is also a multi-stakeholder dialogue platform and supports stakeholders in global governance debates on the major issues of common interest, such as actions to mitigate climate change, protect biodiversity, strengthen food security, and to manage urbanisation. The institute also participates in work to build development trajectories that are compatible with national priorities and the sustainable development goals.

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