



Australian Government
Department of Industry, Science,
Energy and Resources

Mr Ted O'Brien MP
Chair
Standing Committee on the Environment and Energy
PO Box 6021 Parliament House
Canberra ACT 2600

Dear Mr O'Brien

The Department of Industry, Science, Energy and Resources welcomes the opportunity to provide a submission to the Standing Committee on the Environment and Energy's inquiry into the *Climate Change (National Framework for Adaptation and Mitigation) Bill 2020* and the *Climate Change (National Framework for Adaptation and Mitigation) (Consequential and Transitional Provisions) Bill 2020*.

The Bills set out a proposed framework for the development of national climate change adaptation and mitigation plans, including monitoring and reporting on progress.

Below we outline Australia's current climate change mitigation framework, including policy responsibilities, treaty obligations and legislative architecture, as illustrated in **Attachment A**; and matters for consideration by the Committee regarding implementation of some elements of the proposed Bills against the current framework.

Climate change is a global challenge that requires a coordinated global response. Australia is committed to playing its part in addressing this challenge, demonstrated by its active role in negotiating, and ratifying all United Nations Framework Convention on Climate Change (UNFCCC) treaties. Australia's domestic emissions reduction policies are calibrated to support Australia's international emissions reductions commitments, and have underpinned Australia's performance in meeting and overachieving on its targets. Australia's projections and inventory systems are designed and implemented to fulfil Australia's commitments under these treaties and in accordance with UNFCCC treaty obligations.

Following the Machinery of Government changes announced in December 2019 (effective from 1 February 2020), responsibilities for climate change policy are shared between three ministers as follows:

- Minister for Energy and Emissions Reduction, the Hon Angus Taylor MP, is responsible for climate mitigation policies, including national inventory, accounting and projections.
- Minister for the Environment, the Hon Sussan Ley MP, is responsible for climate science and climate adaptation.
- Minister for Foreign Affairs, Senator the Hon Marise Payne, is responsible for international climate change negotiations.

International Climate Change Framework

Australia is a Party to the UNFCCC (1992), the Kyoto Protocol (1997) and the Paris Agreement (2015). Australia's climate change action is undertaken consistent with its

obligations under each of the treaties, and with the rules and standards established by the provisions of the treaties and subsequent decisions of the Parties.

Australia has emissions reduction targets for the period to 2020 under the Kyoto Protocol and UNFCCC and for the period to 2030 under the Paris Agreement (the Agreement). The Agreement requires all Parties to communicate a nationally determined contribution (NDC), including an emissions reduction target, every five years (the first to apply from 2020), and to increase the ambition of each successive NDC.

The Agreement also requires Parties to undertake adaptation planning and action, and developed countries to provide support to developing countries in their efforts to implement the Agreement.

The Agreement requires all Parties to transparently report national emissions, progress towards targets, information on mitigation policies and adaptation actions and support provided to developing countries. Parties are also required to undergo international audit and peer review according to reporting and review rules.

Australia is categorised as an industrialised country under Annex 1 of the UNFCCC and is required to submit reports regularly on its climate change policies and measures. Australia maintains [National Greenhouse Accounts](#) and submits [National Inventory Reports](#) annually, [National Communications](#) every 4 years and [Biennial Reports](#) every 2 years.

Australia's system of National Greenhouse Accounts is one of the most comprehensive, transparent and timely emissions reporting systems in the world (please refer to **Attachment B**). Australia provides emissions estimates annually to the UNFCCC for the previous year. Other developed countries' estimates are up to two years old, and developing countries estimates are at least 4 years old, with some exceptions.

Australia has submitted national inventory reports to the UNFCCC for 20 years and produces a number of additional emissions reports beyond those required by the rules. These include emissions for each state and territory, by industry classifications and on a consumption-basis, quarterly updates of national emissions and annual emissions projections, including a detailed account of progress towards emissions reduction targets.

Australia is a world leader in transparency and accessibility of data. The Australian Greenhouse Emissions Information System (AGEIS) has a publicly accessible web interface which contains all of Australia's emissions data, and Australia's land sector Full Carbon Accounting Model (FullCAM) is available for public download and use. The Department also publishes on its website the National Greenhouse Accounts reports (further detail below), Australia's annual emissions projections data, and international reporting submitted in accordance with UNFCCC requirements.

Attachment C provides some observations from the Department on the Bill's national accounting constructs in the context of the Government's United Nations climate treaty obligations and existing international practice, for consideration by the Committee.

Australian Domestic Climate Change Framework

Australia's domestic climate change framework is underpinned by a robust legislative architecture that regulates the monitoring, accounting and reporting of national emissions reduction. This architecture includes the following:

- *National Greenhouse and Energy Reporting Act 2007 (NGER)* – Establishes the National Greenhouse and Energy Reporting Scheme, which provides the framework for reporting and disseminating company information about greenhouse gas emissions, energy production, energy consumption and other information to support the Government's international treaty obligations and domestic climate program implementation. The Act also establishes the Safeguard Mechanism, which applies emission limits to Australia's highest emitting facilities.
- *Australian National Registry of Emissions Units Act 2011 (ANREU)* – Establishes the secure electronic system used to track the location and ownership of Australian carbon credit units issued under the Emissions Reduction Fund, as well as emission units issued under the Kyoto Protocol.
- *Carbon Credits (Carbon Farming Initiative) Act 2011 (CFI)* – Establishes a framework to credit action to reduce emissions, by issuing Australian carbon credit units (ACCUs). Credits are issued to projects across the economy, for reducing emissions or storing carbon. Projects registered in the Emissions Reduction Fund (ERF) scheme must meet eligibility criteria, including additionality tests and comply with an approved method (technical rules). The CFI Act also establishes that the Clean Energy Regulator may conduct lowest cost carbon abatement purchasing on behalf of the Commonwealth through bi-annual reverse auctions.
- *Renewable Energy (Electricity) Act 2000* – Encourages the additional generation of electricity from renewable sources in an effort to reduce greenhouse gas emissions from the electricity sector and to ensure that renewable energy sources are ecologically sustainable.
- *Clean Energy Regulator Act 2011* – Establishes the Clean Energy Regulator as a non-corporate Commonwealth entity with administrative responsibilities for the NGER, ANREU, CFI and Renewable Energy Acts.
- *Australian Renewable Energy Agency Act 2011* – Establishes the Australian Renewable Energy Agency, to improve the competitiveness of renewable energy technologies and increase the supply of renewable energy in Australia.
- *Clean Energy Finance Corporation Act 2012* – Establishes the Clean Energy Finance Corporation as a statutory authority responsible for facilitating increased flows of finance into the clean energy sector.
- *Climate Change Authority Act 2011* – Establishes the Climate Change Authority, an independent statutory body to provide the Government with expert advice on climate change policies, including through regular reviews of the CFI and NGER Acts.

[Australia's Fourth Biennial Report](#) submitted to the UNFCCC in December 2019 includes additional information on Australia's domestic climate change framework, including emission reduction policies and programs.

Under the ERF, ACCUs can be sold to the Government under contract through a reverse auction or sold to other businesses that are seeking to offset their emissions. While the Government is currently the main purchaser of ACCUs through the ERF, the voluntary market share of the total carbon market is increasing.

The ERF encourages voluntary emissions reduction and storage of carbon across the economy. New measures in response to the recent review *Examining additional sources of low cost abatement* (King Review) will further support voluntary action to reduce emissions. For example, the Safeguard Crediting Mechanism proposed by the King Review, will reward voluntary efforts by large emitters to reduce their emissions intensity, and the resulting carbon units are intended to be available for use in the voluntary carbon market. Additionally, the Clean Energy Regulator is building an exchange platform for emissions reduction units to simplify buying and selling of ACCUs and increase transparency of key market metrics including supply, volumes traded and price. This is expected to reduce transaction costs in the market, placing downward pressure on ACCU prices and unlocking new abatement.

In addition to carbon abatement, ERF projects may achieve a range of other environmental, economic, social and cultural benefits, called co-benefits. In the voluntary market, carbon credits with co-benefits can offer additional value in meeting sustainability commitments. For example, savanna burning projects, which support employment in indigenous and rural communities, continue to lead the voluntary ACCU market, consisting of 80% of the units cancelled in Quarter 3 in 2020. The Clean Energy Regulator has upgraded the ANREU to enable better information to the market regarding the provenance of different abatement units. This will help the market to incorporate the value of co-benefits when buying units.

The Government's Climate Active initiative incentivises voluntary action by recognising business emission reductions. Climate Active certifies business that have credibly reached a state of carbon neutrality by measuring, reducing and offsetting their carbon emissions according to an international best-practice standard. Certification is available for organisations (business operations), products, services, events, buildings and precincts. In the past 12 months, participation in the initiative has grown by 70% to over 200 certifications and more than 7 million offset units (domestic and international) have been purchased and retired. Certification is recognised through the Climate Active certification trade mark, which provides the visual assurance for businesses and consumers.

The Clean Energy Regulator's [quarterly report](#) highlights that the private and state and territory governments market share of the voluntary market grew from 12% in 2018 to 16% in 2019. The report shows voluntary ACCU cancellations to offset emissions totalled 216,000 in Quarter 3 2020, an increase of 63% compared to Quarter 3 2019. Of the 216,000 ACCUs, 83% of voluntary ACCUs cancellations (or 179,000 ACCUs) were by individuals, companies and organisations to become certified carbon-neutral under the Government's Climate Active initiative.

Australia's emission reduction targets, related emission budgets and reporting arrangements

Australia has emissions reduction targets for 2020 and 2030, implemented on an emissions budget basis, covering the periods 2013-2020 and 2021-2030 respectively. Over the 2013-2020 period the Government committed to: a) a 5% reduction in emissions below 2000 levels by 2020 under the UNFCCC's Cancun Agreement; and b) reducing emissions to 99.5% of 1990 levels under the Kyoto Protocol's Doha Amendment. The Kyoto target was designed to be consistent with the Cancun Agreement target. The 2013-2020 emissions budget period ended on 30 June 2020. Based on latest estimates, Australia overachieved on its 2020 Cancun Agreement target by 459 million tonnes, including overachievement from the previous commitment period (2008 to 2012).¹ The Government will submit the inventory accounts for the 2013-2020 budget period to demonstrate compliance with both the Kyoto and Cancun Agreement targets, in 2022.

Over the 2021-2030 period, the Government has committed to a 26% to 28% reduction in emissions below 2005 levels by 2030. Progress towards Australia's 2030 emissions reduction target is also assessed against an emissions budget, covering the period 2021-2030. See **Attachment D** for further detail.

By assessing progress towards the 2020 and 2030 targets through an emissions budget Australia is committed to being accountable for emissions in every single year; the impact of changes in annual emissions in the target period is substantially lessened, better reflecting the long-run trends in Australia's emissions trajectory; and continuity with Australia's commitments under the Kyoto Protocol (2008-2012 and 2013-2020) is maintained. An emissions budget approach is also central to how many other countries acquit progress against their targets, including the European Union and the United Kingdom.

The Department produces a set of [National Greenhouse Accounts](#) to track progress against the Government's emission reduction commitments, including:

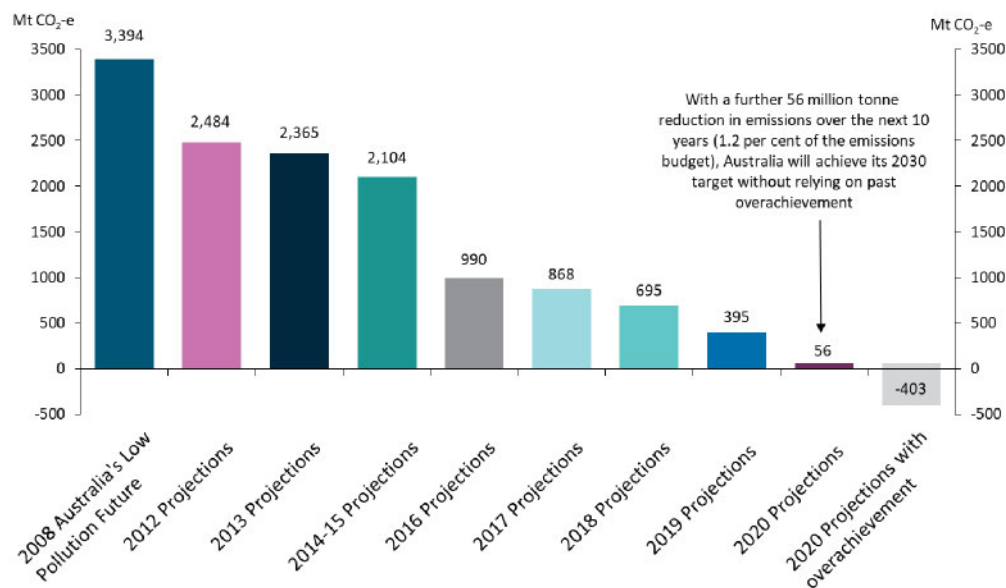
- The [National Inventory Report](#) estimates the national greenhouse gas inventory and must be submitted by the Australian Government under Article 10 of the UNFCCC, and Article 7 of its Kyoto Protocol, between 15 April and 27 May each year. This report will also support reporting under Article 13 of the Paris Agreement. The report is reviewed each year by United Nations' experts and is considered to be a world class inventory reporting system.
- The [State and Territory Greenhouse Gas Inventories](#) provide an overview of annual greenhouse gas emission estimates for each Australian state and territory. These are prepared under the guidance of a National Greenhouse Gas Inventory Committee and, initially, under agreement from the Council of Australian Governments in 1992.
- The [Quarterly Update of Australia's National Greenhouse Gas Inventory: June 2020](#), published on 30 November 2020, reports Australia's latest emission estimates. The Quarterly Update is the subject of a Senate standing order and is required to be tabled in the Senate no later than five months after the end of the quarterly reporting period.

In addition to these National Greenhouse Accounts, the Department produces annual Emissions Projections Reports to estimate Australia's future greenhouse gas emissions and

¹ Quarterly Update of Australia's National Greenhouse Gas Inventory: June 2020, Australian Government Department of Industry, Science, Energy and Resources: page 25

help determine how Australia is tracking against its emissions reduction targets. [Australia's emissions projections 2020](#) report the latest projected emissions out to the year 2030. These reports are also subject of a Senate order requiring tabling by the end of each calendar year. Annual updates reflect changes in Government policies and measures, changes in economic outlook and updates in national inventory estimation methods.

The latest Emissions Projections Report indicates the projected emission trajectory budget over the period 2021 to 2030 is 4,832 Mt CO₂-e for the 26% target and 4,764 Mt CO₂-e for the 28% target. The report also shows Australia is on track to overachieve on its 2030 target by 403 Mt CO₂-e, including overachievement from previous commitment periods; and needs to reduce an additional 56 Mt CO₂-e (26% target) to 123 Mt CO₂-e (28% target) by 2030 to meet its Paris target when overachievement from previous commitment periods is excluded.



Source: Australia's emissions projections 2020, figure 1, page 4

Since 2005, Australia has seen declines in absolute emissions, emissions per capita, and emissions per unit of GDP. Please refer to table at **Attachment E**.

International collaboration

Australia has a long history of practical cooperation with international partners to address the global issue of climate change. Australia has been an active contributor to the development of international climate change agreements since discussions began, making constructive proposals that have been key to addressing deadlocks on a number of occasions.

Australia also collaborates with a number of countries to accelerate the development and deployment of low emission technologies on a global scale and works with international partners through our technical programs to address the twin challenges of implementing emissions reduction targets and dealing with the impacts of climate change.

In order to build international confidence that countries are following through on the commitments made under the climate change agreements, Australia works hand-in-hand with international partners to support them in developing emissions reporting systems, to mirror Australia's world-class systems.

Commonwealth and State / Territory collaboration

The Australian Government collaborates with state and territory governments on emissions reduction through various fora, including the National Greenhouse Gas Inventory Committee, the Energy National Cabinet Reform Committee (ENCRC) and the Energy Ministers' Meeting (EMM).

The purpose of the National Greenhouse Gas Inventory Committee is to provide guidance for Department's preparation of the annual national, state and territory greenhouse gas inventories.

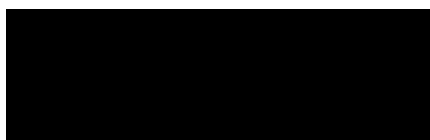
The ENCRC has been established by National Cabinet to progress near and long-term reforms in the electricity and gas markets. The EMM will focused on a small number of priorities, as well as progressing the broader work plan of the former COAG Energy Council. This work will include discussion of improvements to energy productivity and efficiency.

Climate science and adaptation

The Department of Agriculture, Water and the Environment is responsible for implementing the Government's climate science and adaptation policies. The Government is committed to preparing for and adapting to Australia's changing climate with an ambitious agenda that is backed by over \$15 billion of investment, including natural resource management, water infrastructure, drought and disaster resilience and recovery.

I appreciate your consideration of the above information and trust it will be of assistance to the Committee.

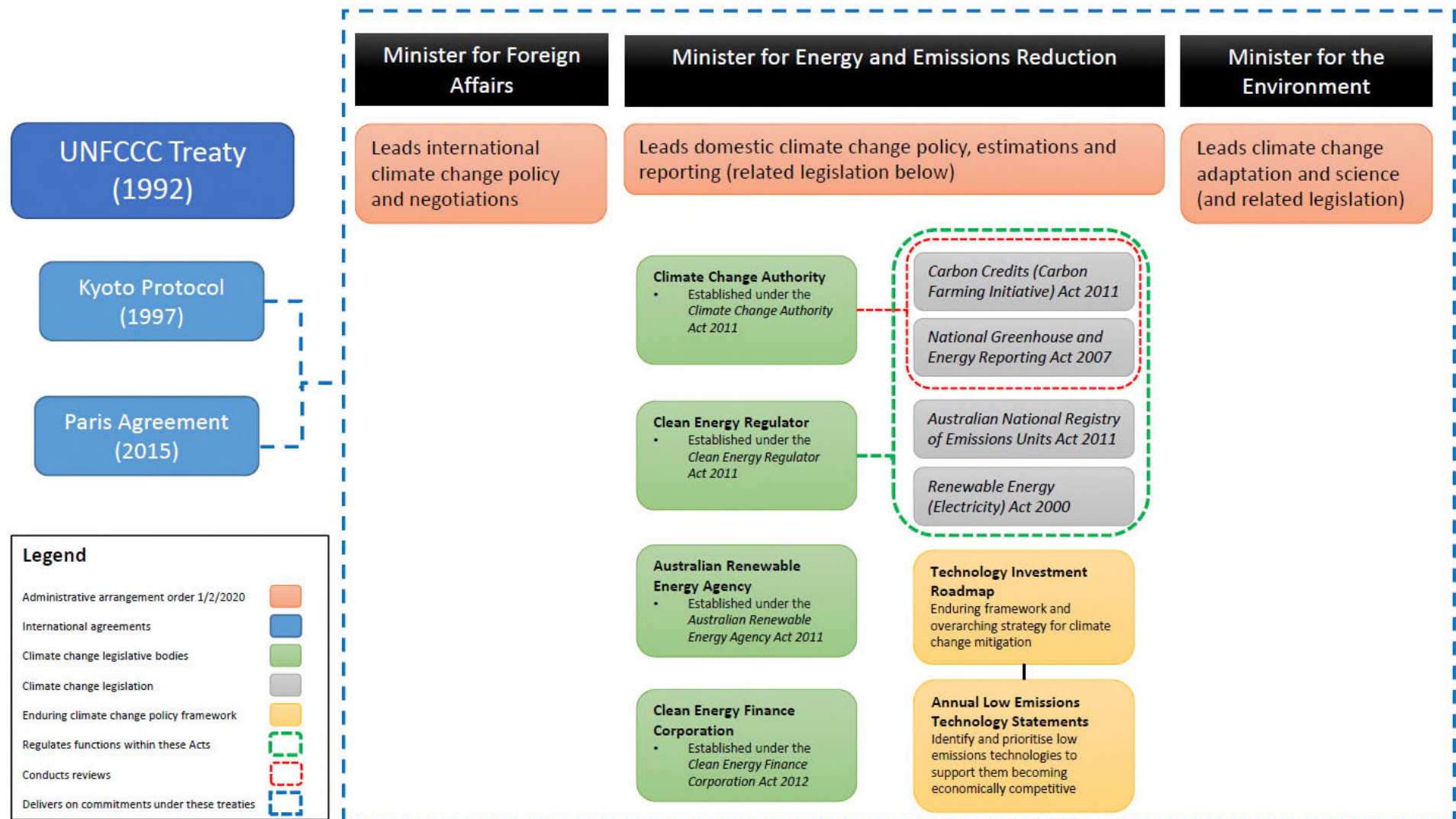
Yours sincerely



Kushla Munro
Acting Deputy Secretary
Department of Industry, Science, Energy and Resources
23 December 2020

Attachment A

Australia's climate change framework



Attachment B

Australia's Emissions Transparency

Australia is a world-leader in transparency of emissions accounting and reporting

- Australia's system of National Greenhouse Accounts has been designed to be one of the most comprehensive, transparent and timely emissions reporting systems in the world.
- Australia provides the most up-to-date estimate of national emissions to the UNFCCC of any country.
 - Every April, Australia provides national emissions estimates for the previous year. Other developed countries' estimates are up to two years old, and developing countries estimates are at least 4 years old, with some exceptions.
- Australia's reports are prepared according to international standards and rules.
 - Australia has submitted national inventory reports to the UNFCCC for 20 years. Australia's inventory is subject to annual UNFCCC international expert review.
 - The national inventory is also subject to performance auditing by the Australian National Audit Office (ANAO) which, following the most recent audit in 2016-17, found Australia's data was accurate to within 99.9% of the true value.
- Australia also produces a number of additional emissions reports, beyond those in the rules, including:
 - Emissions for each state and territory; by industry classifications and on a consumption-basis.
 - Quarterly updates of national emissions. Only a few countries report such data for all sectors in a timely way.
 - Annual projections, including a detailed account of progress towards emissions reduction targets. Under the international rules, countries are only required to report every two years.
- Australia is a world leader in transparency and accessibility of data.
 - The Australian Greenhouse Emissions Information System (AGEIS) has a publicly accessible web interface which contains all emissions data.
 - Australia's land sector, Full Carbon Accounting Model (FullCAM) is available for public download and use.
 - Annual emissions projections data is publicly available.

The table below provides an overview of Australia's global leadership in transparency.

Comparative emissions reporting

Reporting required by international rules					Reporting not required under international rules			
Country	Annual inventory (latest submission)	Age of emissions data	Biennial Reports No. of submissions (out of 4)	Biennial Update Reports No. of submissions (out of 4)	Annual emissions projections	Quarterly GHG emissions updates	Subnational inventories	Inventory by economic sector
Australia	27 May 2020	1 year	4	Not applicable	Yes	Yes	Yes	Yes – standalone report
Canada	14 Apr 2020	2 years	4	Not applicable	Yes ²	No	Yes ³	As part of National Inventory Report (NIR)
European Union	27 May 2020	2 years	4	Not applicable	Yes	Unsure	*by EU member state	As part of NIR
Japan	14 Apr 2020	2 years	4	Not applicable	No	No	No	As part of NIR
New Zealand	15 Apr 2020	2 years ⁴	4	Not applicable	No	No ⁵	No ⁶	As part of NIR
Norway	3 Apr 2020	2 years ⁷	4	Not applicable	No	No	Yes ⁸	As part of NIR
Russia	15 Apr 2020	2 years	4	Not applicable	No	No	No	As part of NIR
Turkey	13 Apr 2020	2 years	4	Not applicable	No	No	No	As part of NIR
United Kingdom	15 Apr 2020	2 years	4	Not applicable	Yes	Yes	Yes	As part of NIR
United States	14 Apr 2020	2 years	2	Not applicable	Some sectors ⁹	Some sectors ¹⁰	Yes	As part of NIR

Sources: Biennial Reports: <https://unfccc.int/BRs> | Emissions projections: (EU) <https://www.eea.europa.eu/publications/trends-and-projections-in-europe-1> (UK) <https://www.gov.uk/government/collections/energy-and-emissions-projections> (US) <https://www.epa.gov/global-mitigation-non-co2-greenhouse-gases/global-non-co2-greenhouse-gas-emission-projections> (AU) <https://www.industry.gov.au/policies-and-initiatives/australias-climate-change-strategies/projecting-greenhouse-gas-emissions> (CA) <https://www.canada.ca/en/environment-climate-change/services/climate-change/greenhouse-gas-emissions/projections.html> (US) <https://www.eia.gov/outlooks/aeo/> | Quarterly or provisional emissions updates: (UK) <https://www.gov.uk/government/statistics/provisional-uk-greenhouse-gas-emissions-national-statistics-2019> (AU) <https://www.industry.gov.au/data-and-publications/national-greenhouse-gas-inventory-quarterly-updates> (NO) <https://www.ssb.no/en/natur-og-miljo/statistikker/klimagassn> (US) <https://www.epa.gov/airmarkets/power-sector-emissions-data> and <https://www.epa.gov/sites/production/files/2020-04/documents/us-ehg-inventory-1990-2018-data-highlights.pdf> Subnational emissions: (NO) <https://www.miljodirektoratet.no/tjenester/klimagassutslipp-kommuner/?area=618§or=2> (CA) <https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/greenhouse-gas-emissions.html> | Emissions by economic sector: (NO) <https://www.ssb.no/en/natur-og-miljo/statistikker/nrmiljo>

² Progress towards Canada's greenhouse gas emissions reduction target <https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/progress-towards-canada-greenhouse-gas-emissions-reduction-target.html>

³ Canada greenhouse gas emissions by province and territory <https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/greenhouse-gas-emissions.html>

⁴ The Ministry of Business, Innovation and Employment (MBIE) produces energy data on an N-1 basis. <https://www.mbie.govt.nz/dmsdocument/11679-energy-in-new-zealand-2020>

⁵ New Zealand has published a report on emissions by industry and household <https://www.stats.govt.nz/information-releases/greenhouse-gas-emissions-by-region-industry-and-household-year-ended-2018>

⁶ New Zealand has published a one-off regional report of emissions <https://www.stats.govt.nz/information-releases/greenhouse-gas-emissions-by-region-industry-and-household-year-ended-2018>

⁷ Domestic reporting at N-1 for some sectors <https://www.ssb.no/en/natur-og-miljo/statistikker/klimagassn>

⁸ <https://www.miljodirektoratet.no/tjenester/klimagassutslipp-kommuner/?area=618§or=2>

⁹ US Energy sector annual projections <https://www.eia.gov/outlooks/aeo/>

¹⁰ US quarterly emissions power sector <https://www.epa.gov/airmarkets/power-sector-emissions-data>

Attachment C

Observations on the Bill's provisions for the definition of 'net accounting emissions', 'eligible offsets', and related definitions

The Australian Government's approach to accounting under the Paris Agreement

The Australian Government's approach to defining and accounting towards its 2030 emission reduction target under the Paris Agreement is designed to be consistent with its obligations under that treaty.

Under the Paris Agreement developed country Parties undertake economy-wide emission reduction targets, as part of their "Nationally Determined Contributions" or "NDCs"¹¹, and consistent with preceding targets under the UNFCCC and Kyoto Protocol.

The Paris Agreement also requires Parties to account for their NDCs. In accounting for anthropogenic emissions and removals corresponding to their NDC, Parties shall promote among other things environmental integrity, and ensure the avoidance of double counting, in accordance with guidance adopted by the Conference of the Parties to the Paris Agreement¹².

The Paris Agreement established an Enhanced Transparency Framework¹³, and under that Framework adopted additional rules related to accounting and reporting on NDCs¹⁴. The Framework builds on and enhances transparency arrangements under the UNFCCC and is underpinned by IPCC guidance.

The Government's first NDC under the Paris Agreement is an economy-wide emissions reduction of 26 to 28 per cent below 2005 levels by 2030, to be implemented as an emissions budget covering the period 2021-2030.

Australia's national greenhouse gas inventory, prepared in accordance with the Paris Agreement's Enhanced Transparency Framework, will provide the basis for calculating the NDC's emissions budget and for the accounting of emissions outcomes against that budget¹⁵.

National emissions outcomes over the NDC period 2021-2030 will be calculated on a net-net basis; meaning emissions minus removals accumulated over the commitment period (2021-2030) are compared with a budget derived from emissions minus removals in the base year (2005).

This approach will be applied in aggregate using emissions and removals estimates reported in the national inventory for the complete set of IPCC-classified sectors: energy; industrial processes and product use; agriculture; waste and, land use, land use change and forestry (LULUCF).

By effectively treating emissions and removals from the LULUCF sector the same way as other emissions sources, the Government's accounting approach adheres to the key Paris Agreement accounting principles of completeness, consistency and accuracy.

¹¹ Paris Agreement, Article 4.4

¹² Paris Agreement, Article 4.12

¹³ Article 13.1

¹⁴ Decision 18/CMA.1

¹⁵ The Department of Industry, Science, Energy and Resources produces the annual National Greenhouse Gas Inventory as part of the set of National Greenhouse Accounts which also includes accounts at State and Territory and Industry levels as well as the *Quarterly Update of the National Greenhouse Gas Inventory*. The annual Accounts are prepared under the guidance of the National Greenhouse Gas Inventory Committee, comprising Commonwealth and State and Territory representatives.

Use of offsets in the net accounting emissions construct

The Bill's "net accounting emissions" construct (section 5) introduces the concept of "eligible offsets". Such a concept must be tightly defined to avoid inaccuracies, and under some circumstances, double counting in the national accounting framework.

The meaning of "eligible offsets" in section 5 of the Bill is not yet clear, however it is noted that the use of a carbon unit like an 'offset' – which is a financial instrument - is not a mandatory feature of net zero emission national accounting frameworks. In Canada, for example, such instruments are not present in the bill¹⁶ currently before the Canadian Parliament. Canada will simply account for its net-zero emissions target using the Canadian national greenhouse gas inventory.

In tightly defined circumstances, however, carbon units can have a supplementary place in national accounting frameworks in the context of Kyoto Protocol-like international emissions trading or to provide a mechanism to transfer the right to emit from one emissions budget to another.

In New Zealand, in the *Climate Change Response (Zero Carbon) Amendment Act 2019*¹⁷, carbon units may supplement the national greenhouse gas inventory and are part of the national accounting formulation, but are explicitly identified as arising from 'offshore mitigation' and further defined to include carbon units from outside of New Zealand.

In the United Kingdom (UK), in the *Climate Change Act 2008*¹⁸, carbon units are part of the national accounting and reflect the net credit of units to the 'net UK carbon account'. In particular, the net UK carbon account reflects the net purchase of allowances from international actors under the European Union Emissions Trading Scheme.

In the UK and New Zealand examples, successive emission budgets are also linked through the possibility of banking overachievement of an emissions budget for use in following budgets. They are also linked through the possibility of borrowing from future budgets. For the latter situation, in New Zealand there is a limit of 1 per cent of emissions which effectively expresses a tolerance for overshooting an emissions budget – but with the proviso that any overshoot in emissions is compensated for in the following budget. In these countries' legislation, tolerances for overachievement and overshooting are considered to be tools to assist the management of the unpredictable nature of emission trajectories at national levels.

The linking of successive emission budgets also provides continuity and effectively allows for a continuous emission budget over the period 2021-2050. In this, the policy architecture of the UK and New Zealand mimics the frameworks used by the IPCC in their assessments of the available global carbon budgets that relate to specified global temperature objectives.

There has been one instance – now in the past – where the issuance of domestic offsets was used in national accounting.

During the Kyoto Protocol first commitment period (2008-2012) the extent of emissions and removals in the LULUCF sector captured by the accounting process was highly restricted. "Removal Units" were issued for eligible activities only. These eligible activities were specified reforestation and deforestation activities and, in Australia, these activities covered just 1 per cent of Australia's land mass. Abatement actions on other lands across Australia did not count towards Australia's accounting for its target in this period. In these

¹⁶ <https://parl.ca/DocumentViewer/en/43-2/bill/C-12/first-reading#ID0E0B80AA>

¹⁷ <http://www.legislation.govt.nz/act/public/2019/0061/latest/LMS183848.html>

¹⁸ <https://www.legislation.gov.uk/ukpga/2008/27/section/1>

circumstances, an internationally-authorised, domestically issued Removal Unit represented an emission or removal authorised to enter the national accounting process.

For the Paris Agreement, however, under the Australian Government's NDC special issuance of domestic offsets is not required for national accounting. All net emissions from all lands will be accounted for – without restriction - using the independent monitoring systems of the national inventory. Through the national inventory there is complete coverage of the land sector in the Government's target acquittal.

Domestically issued offsets play a role in incentivising domestic abatement action – but would not enter the national accounting process unless an 'offset' unit was able to be exported out of Australia. In this case, other things being equal, a net zero emissions objective would require Australia to take account of any exported offset units by reducing net emissions to below zero.

Principle of national territory, and fossil fuel export emissions

The emissions and removals reported in the national inventory, and so used for accounting against the 2030 target emission budget, are those that take place within Australia's jurisdiction. This approach is consistent with the long-standing IPCC concept of "national territory" that underpins all UN climate treaties including the Paris Agreement.

That key concept provides national inventories include "emissions and removals taking place within national territory and offshore areas over which the country has jurisdiction". As stated by the IPCC, this and other key IPCC concepts, help ensure that inventories are comparable between countries, and do not contain double counting or omissions.

Consistent with this approach, emissions from the combustion of Australia's fossil fuel exports are included in the national inventories of importing countries¹⁹. The three biggest destinations of Australia's fossil fuel exports, the Governments of Japan, Republic of Korea and China, will estimate and report emissions from their combustion processes of imported (and domestically produced) fuels under the Paris Agreement. Each of these countries have committed to NDCs under which emissions from combustion of these fuels would be taken into account.

Notes on concepts of emissions and removals

Under the Paris Agreement Enhanced Transparency Framework, "emission" and "removal" are defined in accordance with the *2006 IPCC Guidelines for National Greenhouse Gas Inventories* (IPCC 2006). The former means "The release of greenhouse gases and/or their precursors into the atmosphere over a specified area and period of time", while the latter means "Removal of greenhouse gases and/or their precursors from the atmosphere by a sink".

The LULUCF sector consists of both removals and emissions – however, in many cases across the landscape it is not always possible to distinguish between emissions and removals and, instead, national inventories simply report estimated changes in carbon stocks.

In the national inventory, the concept of "emission" is the same as the *National Greenhouse and Energy Reporting Act 2007* (NGER Act) concept of 'scope 1 emissions'. Under the NGER Act "emission" is defined to include both 'scope 1 emissions' and 'scope 2 emissions'. This is also how "emissions" is defined under section 5 of the Bill. This is not, however, a useful definition in the context of the national inventory or an NDC acquittal because 'scope 2 emissions' are simply an artificial construct derived from the 'scope 1 emissions' already covered by the inventory (and reported in the IPCC sector for

¹⁹ Australia's inventory includes estimates of emissions from the extraction of fossil fuel exports to the extent that the emissions occur within Australia's jurisdiction, and would account for these emissions against the emission budget set out in the Australian Government's NDC.

‘electricity’). That is, working with the NGER definition of emissions would lead to double counting.

Background on Australia’s UN climate treaty reporting obligations, and underpinning national emissions estimation and reporting systems

The Australian Government places great importance on compliance with the UN climate treaties, in particular their rules for transparency in the way Australia’s greenhouse gas emissions are estimated and reported, and accountability for outcomes achieved against international emission reduction commitments.

The Government is Party to all three UN climate treaties, and has committed to emission reduction targets under each. While the treaties’ emissions estimation and reporting requirements are underpinned by the same fundamental concepts and principles, their details differ somewhat.

International processes to assess Australia’s compliance with its 2020 targets under the UNFCCC’s Cancun Agreement and Kyoto Protocol’s Doha Amendment are expected to conclude in 2023-2024. Over this time, the Government’s annual National Inventory Report to the UN will continue to provide national emission and removals estimates that meet both treaties’ emission estimation requirements, and support assessment of target compliance. The emission estimates will also form part of the Government’s final Biennial Report to the UNFCCC, which includes Australia’s assessment of performance against its Cancun Agreement target and its future emissions estimates.

Under the Paris Agreement, from 2023, the Government will submit annual National Inventory Reports, Biennial Transparency Reports and four yearly National Communications. The reports will include information on Australia’s national emission and removals estimates and progress towards its 2030 target, prepared in accordance with Paris Agreement requirements. The reports will also include information on Australia’s policies and measures, adaptation actions, and support provided to developing countries.

Australia’s national inventory independent emissions monitoring systems are designed to support implementation of these UN climate treaty requirements. The requirements include emission estimation consistent with Intergovernmental Panel on Climate Change (IPCC) guidelines, and that reported information adheres to principles of transparency, accuracy, time series consistency, completeness and comparability with other countries.

Australia’s national inventory reflects changes in emissions and removals detected by the independent emissions monitoring systems. Domestic abatement programs act to influence national emissions and removals. The impacts of these programs detected by the monitoring system are reflected in the national inventory, and accounted against Australia’s emission reduction targets.

Assurance of the national inventory’s compliance with the UN climate treaties’ emissions estimation and accounting requirements is provided through annual UN audits. Each year a team of international experts review the emissions and removals estimates, and the underpinning national inventory system for compliance with treaty rules and guidelines. Domestically, the national inventory system has been audited by the Australian National Audit Office on two occasions, 2010 and 2017, providing further assurance of data integrity.

Australia is recognised internationally for excellence in emissions estimation and its underpinning national inventory system. Other countries, including Thailand, Indonesia and China, have actively sought to learn from Australia’s twenty years of experience and expertise to enhance implementation of their own international emissions reporting commitments, and better inform their contribution to global climate action.

In addition to the annual National Inventory Report, Biennial Report, and four-yearly National Communication submitted by the Government in accordance with its UN climate treaty obligations, the Department of Industry, Science, Energy and Resources also produces an annual Projections report that provides an assessment of Australia's future emissions and tracks progress towards the Government's emission reduction targets. Projections data forms a part of the Biennial Reports and National Communications.

In terms of climate adaptation reporting, Australia has consistently reported on adaptation actions through National Communications. Under Article 7 of the Paris Agreement, Australia is expected to undertake adaptation planning processes and implement adaptation actions including the development or enhancement of relevant plans, policies and/or contributions. Australia will continue to report on adaptation measures through National Communications or through separate reports.

Attachment D

Methodology for calculating Australia's emissions budget over the period 2021 to 2030

Australia considers its 2030 emissions budget as a ten year commitment from 2021 to 2030. The emissions budget is calculated by taking a straight line from 2020 to 2030, beginning from the 2020 target of 5 per cent below 2000 levels and finishing at 26 per cent and 28 per cent below 2005 levels in 2030. Australia's progress is assessed as the difference in cumulative emissions between projected emissions and the emissions budget from 2021–2030.

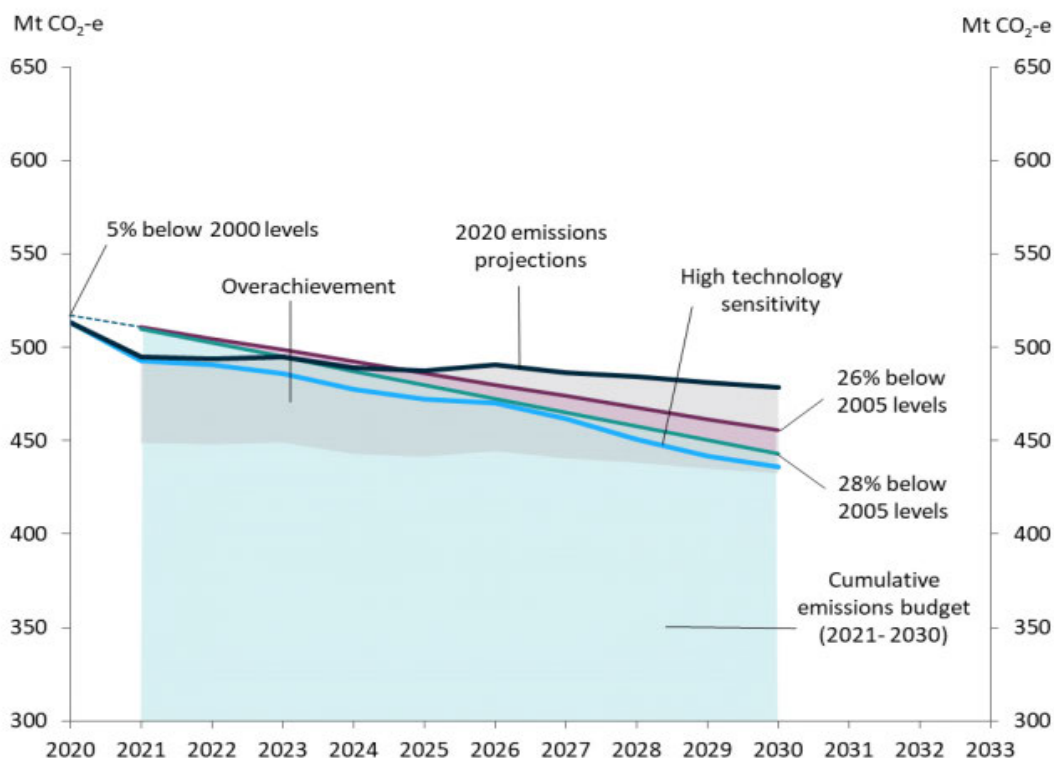
By assessing progress against the 2030 target through an emissions budget:

- Australia is committed to being accountable for emissions in every single year;
- The impact of changes in annual emissions in the target period is substantially lessened, better reflecting the long-run trends in Australia's emissions trajectory; and
- Continuity with Australia's commitments under the Kyoto Protocol (2008-2012 and 2013-2020) is maintained.

An emissions budget approach is central to how many other countries acquit progress against their targets, including the European Union and the United Kingdom.

Australia's 2030 target is inclusive of all emissions and removals of greenhouse gases reported in its annual national inventory under the UNFCCC. This includes the gases CO₂, CH₄, N₂O, HFCs, PFCs, SF₆ and NF₃ and the energy, industrial processes and product use, agriculture and waste sectors and UNFCCC LULUCF sub-classifications (cropland, forest land, grassland, harvested wood products, settlements and wetlands).

Australia's cumulative emissions reduction task to 2030, Mt CO₂-e



Source: Australia's emissions projections 2020, figure 2, page 5

Attachment E

Change in emissions and renewable energy comparators for selected countries

	Change in emissions 2005–2018 ²⁰	Change in per capita emissions 2005–2018 ²¹	Change in emissions per unit of GDP 2005– 2018 ²²	New renewable energy capacity installed per person 2019 (watts)	2019 per capita investment in renewables (\$A)
Australia	-13% ²³	-29%	-51%	240.3	324.7
Canada	-0.1%	-13%	-37%	22.8	32.9
China	+69% (WRI 2016)	+60% (WRI 2016)	-41% (WRI 2016)	45.2	87.8
EU	-20%	-22%	-50%	66.0	Not available
G20	+15% (WRI 2016)	+5% (WRI 2016)	-33% (WRI 2016)	32.2	Not available
Germany	-15%	-16%	-49%	74.3	95.8
Japan	-8%	-7%	-30%	54.5	191.3
New Zealand	-1%	-16%	-45%	6.7	83.8
OECD	-9% (WRI 2016)	-16% (WRI 2016)	-38% (WRI 2016)	53.9	Not available
South Korea	+29% (UNFCCC 2016)	+21% (UNFCCC 2016)	-28% (UNFCCC 2016)	69.7	58.4
United Kingdom	-34%	-40%	-58%	44.9	115
United States	-10%	-19%	-43%	54.6	255.9

Sources: *Historical emissions*, Official estimates submitted to the UNFCCC where available, otherwise World Resources Institute (WRI) CAIT *Population data*: World Bank; *Gross Domestic Product* IMF, current prices (Purchasing power parity); IRENA Renewable energy statistics 2020; BNEF Clean Energy Investment - covers only Asset Finance and Small Scale Solar classes of investments, in the following subsectors: Biofuels, Biomass, Geothermal, Small hydro, Solar - PV, Solar - Thermal, Wind - Offshore, Wind – Onshore; US\$ converted to Australian dollars based on average rate for year ended 31 December 2019 per ATO; G20 & OECD totals derived from watts installed in member countries/population of member countries.

²⁰ UNFCCC 2018 for Annex I countries, WRI CAIT 2016 for non-Annex I and OECD. South Korea are a non-Annex I party that reported their 2005 and 2016 greenhouse gas emissions to the UNFCCC. These numbers were used for the analysis instead of WRI CAIT.

²¹ Population data: World Bank, Emissions data: UNFCCC where available, otherwise World Resources Institute CAIT.

²² GDP data: GDP, current prices (Purchasing power parity; billions of international dollars) (IMF) data; Emissions data: UNFCCC where available, otherwise World Resources Institute CAIT.

²³ Quarterly Update of Australia's National Greenhouse Gas Inventory: June 2020 states Australia's emissions have declined 16.6 per cent since 2005.

