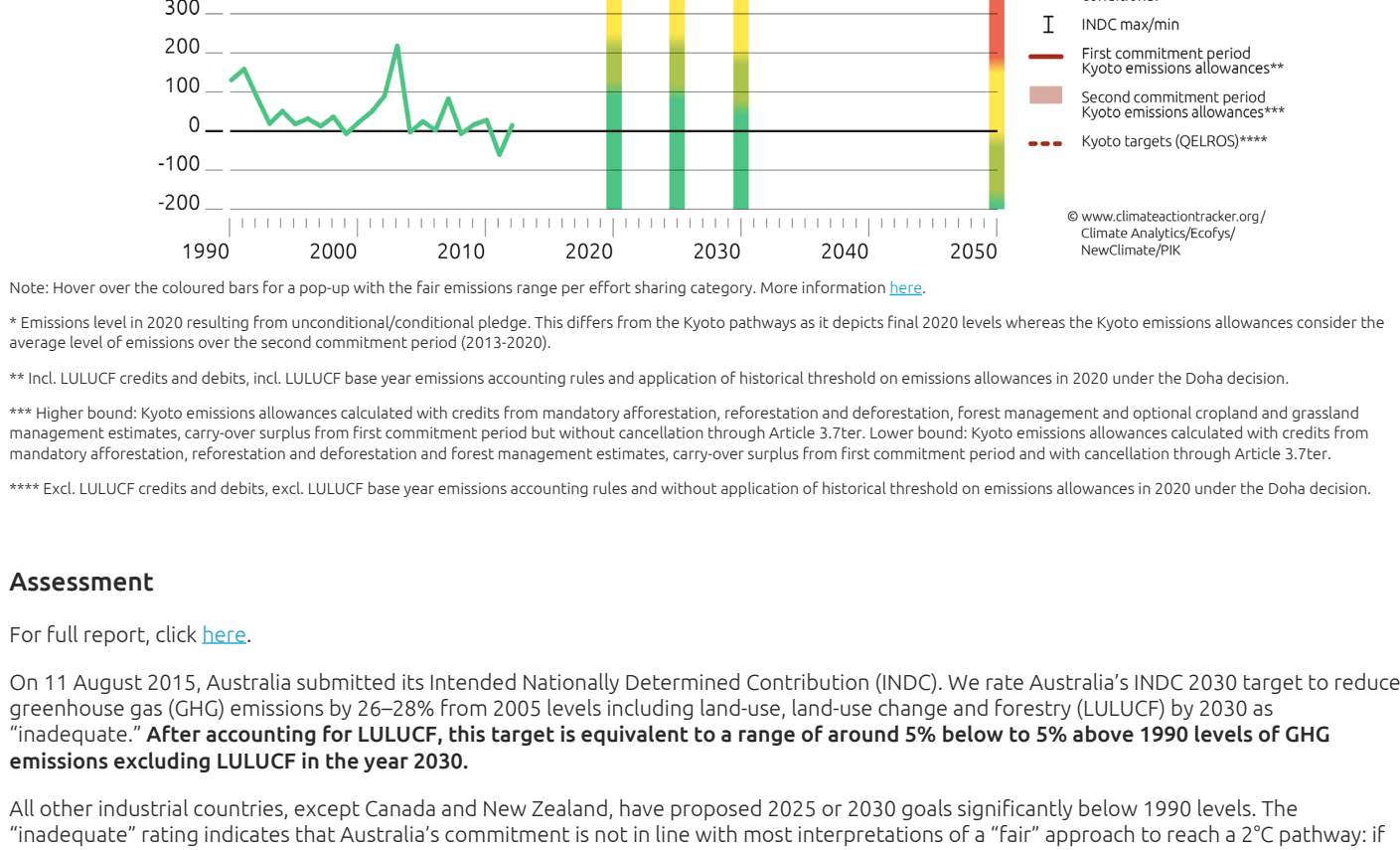
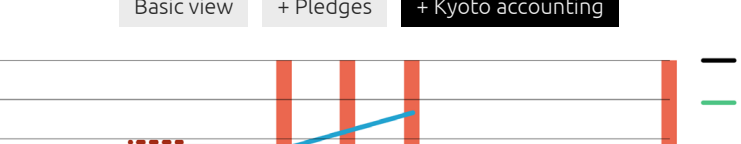


Rating



* Howers over the coloured bars for a pop-up with the fair emissions cap per effort sharing graph. More information [here](#).
 ** Emissions level in 2020 resulting from unconditional/conditional pledges. This differs from the Kyoto pathways as it depicts final 2020 levels whereas the Kyoto emissions allowances consider the average level of emissions over the second commitment period (2013-2020).
 *** Incl. LULUCF credits and debits, incl. LULUCF base year emissions accounting rules and application of historical thresholds on emissions allowances in 2020 under the Doha decision.
 **** Higher bound: Kyoto emissions allowances calculated with credits from mandatory afforestation, reforestation and deforestation, forest management and optional cropland and grassland management estimates, carry-over surplus from first commitment period but without cancellation through Article 3.7er. Lower bound: Kyoto emissions allowances calculated with credits from mandatory afforestation, reforestation and deforestation and forest management estimates, carry-over surplus from first commitment period and with cancellation through Article 3.7er.
 ***** Excl. LULUCF credits and debits, excl. LULUCF base year emissions accounting rules and without application of historical threshold on emissions allowances in 2020 under the Doha decision.

Assessment

For full report, click [here](#).

On 11 August 2015, Australia submitted its Intended Nationally Determined Contribution (INDC). We rate Australia's INDC 2030 target to reduce greenhouse gas (GHG) emissions by 26–28% from 2005 levels including land-use, land-use change and forestry (LULUCF) by 2030 as "inadequate." **After accounting for LULUCF, this target is equivalent to a rate of around 5% below to 5% above 1990 levels of GHG emissions excluding LULUCF in the year 2030.**

All other industrial countries, except Canada and New Zealand, have proposed 2025 or 2030 goals significantly below 1990 levels. The "inadequate" rating indicates that Australia's commitment is not in line with most interpretations of a "fair" approach to reach a 2°C pathway: if most other countries followed the Australian approach, global warming would exceed 3–4°C.

Australia is one of five industrialised countries rated "inadequate" by the Climate Action Tracker (the other four are Canada, Japan, New Zealand and Russia). There is no single metric, such as rate of improvement in emissions per capita or improvement of emissions intensity, that can be used to rank the country unambiguously, given different starting years, base years and history of action (or inaction) on climate policy. Based on a range of metrics, Australia's INDC is in the bottom half of the range of the industrialised countries.

Australia has a large gap between policies and targets

Australia stands out as having the largest relative gap between current policy projections for 2030 and the INDC target. With currently implemented policy measures, **Australia's emissions are set to increase substantially to more than 27% above 2005 levels by 2030**, which is equivalent to an increase of around **61% above 1990 levels**. Australia's Direct Action Plan does not put Australia anywhere close to a track that meets its INDC 2030 target. The additional funding announced in August 2015 by the Government for post-2020, should it be re-elected in 2016, would reduce this projected increase by only 2%, to around 25% above 2005 levels (equivalent to 57% above 1990).

Of the nine industrialised countries assessed, Australia ranks eighth on its projected rate of reduction in per capita emissions, exceeded only by Russia, and eighth on projected improvement in emissions intensity for the period from 2012 to 2030, with Canada ranking worst.

In July 2014, against international trends, the Australian Government abolished its nascent Carbon Pricing system by partly repealing its Clean Energy Future Plan, which marked a negative turning point in Australia's climate policy. Before the repeal, Australia's climate policy was projected to bring Australia halfway towards the announced INDC 2030 target (5% above 2005 levels).

The repeal of the Clean Energy Future Package creates a large emissions gap

The CAT has assessed recent policy developments in Australia, including the Emissions Reduction Fund, the scaling back of the Renewable Energy Target (RET) and, as well the most recent emissions projections published by the Government. Contrary to government assertions (Australian Government, 2015b), the abatement task has increased considerably over the years, reflecting the negative consequences of the repeal and the Australian government's amendments of key climate policies in recent years.

The CAT estimates that before the repeal of the Clean Energy Future Package, Australia was on track to meet their 2020 target. With the repeal, policies fall short and a cumulative abatement task of at least 153 MtCO₂e between 2013–2020 remains. The scaling back of the Renewable Energy Target (RET) from 41,000 GWh to 33,000 GWh by 2020 translates into an extra 97-141 MtCO₂e of cumulative abatement required during the period 2012–2020. After accounting for this and the effects of the ERF, we estimate **1.1 MtCO₂e of cumulative abatement challenge between 2013 and 2030 of between 1.5–1.7 GtCO₂e (equivalent to roughly three years of Australia's current national emissions)**.

It is clear from our present assessment that currently planned policies are inconsistent with the INDC 2030 target and Australia needs substantially more policies to meet that target. To meet its 2030 emissions targets, Australia needs to decrease its emissions by an average annual rate of 2% until 2030; instead, with current policies, emissions are set to increase by an average rate of 1.5% a year.

For the 2020 period Australia has a target under the Kyoto Protocol's second commitment period (2013–2020) to limit average yearly emissions to 99.5% of 1990 base levels (a 0.5% reduction). After taking into account Kyoto protocol accounting rules (notably a modified "gross-net" accounting approach for LULUCF activities), Australia would be allowed to increase its GHG emissions by **23–48% above 1990 levels by 2020 excluding LULUCF**.

With current policies projected to increase emissions to 35 to 40% above 1990 levels by 2020, meeting the second commitment period targets may require very little, if any, action, due to the substantial amount of LULUCF credits or allowances that Australia obtains under its agreement. Put another way, the **treatment of LULUCF under Kyoto rules allows Australia to continue increasing its emissions until 2020, yet still meet its 2020 target**.

Should Australia fail to ratify the Doha amendments for the Kyoto Protocol's second commitment period, then its 2020 Copenhagen pledge will be relevant. The CAT estimates Australia's unconditional Copenhagen pledge—to reduce emissions by 5% below 2000 emissions by 2020—is equivalent to approximately a 26% increase above 1990 levels of GHG emissions excluding LULUCF—after taking into account Australia's inclusion of afforestation, reforestation and deforestation (ARD) emissions in year 2000 base level emissions and in the 2020 target year.

In its INDC for 2030, Australia specifies that it will apply a "net-net" accounting approach to its target. What this means is that "net" emissions, i.e. all national emissions including removals from LULUCF, are used to define the emissions levels used in both the base year and the 2030 target period. Even though there is large uncertainty associated with LULUCF data (e.g. in estimating sinks and high variability due to factors such as wildfires, droughts or other weather extremes), this approach allows for comparing like with like, as opposed to the modified gross-net accounting approach applied under the Kyoto Protocol, and which would apply for the period to 2020, should Australia ratify the second commitment period of the protocol, for its 2020 target.

An important aspect of the Australian INDC is that the 2030 target remains provisional on the "rules and other underpinning arrangements of the agreement" and that Australia reserves the right to adjust its target. This adds an unusually high level of uncertainty to Australia's contribution to the 2015 global agreement at this point. Should the target be adjusted and/or any of the underlying rules altered, this assessment will have to be updated.

Pledge description

Australia's 2020 pledge and post-2020 INDC

Post-2020 INDC Target

On 11 August 2015, Australia announced a 26–28% reduction of greenhouse gas emissions by 2030 below 2005 levels including LULUCF. This translates into a range of 445–458 MtCO₂e allowed emissions levels in 2030 incl. LULUCF (equivalent to a reduction of 15–18% below 1990 emissions levels incl. LULUCF). Analysis of the effect of the INDC on likely fossil fuel and industrial^[1] GHG emissions is made difficult by the fact that the INDC target includes LULUCF emissions, which are substantial, and fluctuate significantly (Figure 2 under "Data Sources and assumptions" in the [Australia report](#)). We have estimated levels of emissions excl. LULUCF resulting from the INDC by subtracting projected emissions for the LULUCF sector in 2030 from the targeted level incl. LULUCF. We estimate that the INDC translates into emissions levels of 395–437 MtCO₂e emissions excl. LULUCF (that is, around 5% below to 5% above 1990 emissions levels excl. LULUCF).

Australia's INDC ranks at the bottom of industrialised countries

A comparison of GHG emissions levels (excl. LULUCF) achieved by INDCs expressed as reductions below 1990 (Table 1) shows that Australia's INDC is at the bottom of the ranking of industrialised countries together with Canada and New Zealand. This pattern holds with different choices of base year, although it becomes less prominent for more recent base years. For example, the difference in reductions below 2005 achieved by the INDC in Australia and in the EU is less strong than when compared to 1990—this is due to the fact that while emissions were increasing by roughly 26% between 1990 and 2005 in Australia, they were decreasing by 8% in the EU.

The INDC target results in emissions levels that are far above emissions levels resulting from the Climate Change Authority (CCA) recommendations for Australia's future emissions reduction target (Australian Climate Change Authority, 2015). In July 2015, the CCA recommended an emissions reduction target of 30% below 2000 levels by 2025 (incl. LULUCF). The Authority did not recommend a target for 2030, but has estimated that Australia should be aiming to reduce emissions by 40–60% below 2000 levels (incl. LULUCF) by 2030. These targets would translate into reductions of 11–19% in 2025 and 25–59% in 2030 below 1990 emissions levels excl. LULUCF and would bring Australia much closer to being in line with 2°C and placing it in the "medium" category in 2030.

An important aspect of the Australian INDC is that the 2030 target remains provisional on the "rules and other underpinning arrangements of the agreement" and that Australia reserves the right to adjust it. This adds high uncertainty to Australia's contribution of Australia to the 2015 global agreement. The conclusions of the present CAT assessment are subject to the same uncertainty and will need to be revised once any adjustments to the target and proposed LULUCF accounting approaches are made.

Table 1: GHG Emissions levels (excl. LULUCF) in 2030 resulting from the INDC in 2025 terms and expressed as reductions below 1990, 2000 and 2005 base years. Note that for the USA, 2030 levels result from the linear interpolation between the 2025 emissions levels implied by the INDC and the long-term target in 2050.

	INDC emissions levels (excl. LULUCF) (MtCO ₂ e)		INDC emissions levels (excl. LULUCF) relative to base year (%)			CAT rating
	2030	1990	2005	2000	2005	
Australia	395-437	-4.9% to 5.4%	-19% to -11%	-24.6% to -16.4%	-21%	Inadequate
Canada	578	-2.2%	-20%	-3.1%	-2.1%	Inadequate
EU	3376	-40%	-33%	-3.4%	-3.4%	Medium
Japan	1079	-13%	-17%	-2.0%	-2.0%	Inadequate
New Zealand	59-68	-3% to 13%	-1% to -3%	-25% to -13%	-1%	Inadequate
Norway	620	-61% to -40%	-63% to -44%	-66% to -44%	-66%	Medium
Russia	2986-3163	-11% to -6%	-45% to 54%	-40% to 48%	-40%	Inadequate
Switzerland	26	-50%	-49%	-51%	-51%	Medium
USA	4307-4682	-31% to -25%	-39% to -34%	-40% to -35%	-35%	Medium

Table 1: GHG Emissions levels (excl. LULUCF) in 2030 resulting from the INDC in 2025 terms and expressed as reductions below 1990, 2000 and 2005 base years. Note that for the USA, 2030 levels result from the linear interpolation between the 2025 emissions levels implied by the INDC and the long-term target in 2050.

Kyoto Protocol First Commitment Period Target (2008-2012)

Australia's Kyoto Protocol target for the first commitment period (CPI) (2008–2012) was to limit the increase in its GHG emissions excl. LULUCF to 8% above to 1990 levels (excl. QELRO of 108% of base year emissions).

Under the Kyoto Protocol accounting rules (notably Kyoto Protocol Article 3.7), Australia is allowed to add deforestation emissions to its base year for calculating its commitment period emissions allowances. This leads to an increase in Australia's allowances of about 30% per year of the commitment period (further details in Box 2). Other LULUCF accounting rules applicable to Australia in the first commitment period (Article 3.3), certain land-use change and forestry activities (mainly deforestation) provided debits, which were subtracted from the allowed GHG emissions excl. LULUCF during the commitment period.

Overall, Article 3.7 and the other LULUCF provisions of the Kyoto Protocol resulted in emission allowances exceeding actual emissions by about 100 MtCO₂e, despite minimal policy action for that period. Australia ended CPI with a surplus emissions allowance of about 100MtCO₂e to be transferred to the second commitment period, principally as a consequence of Article 3.7 (which is often called the Australia clause^[6]).

Kyoto Protocol Second Commitment Period Target (2013-2020)

Australia has a target under the Kyoto Protocol's second commitment period (2013–2020) to limit average yearly emissions to 99.5% of 1990 base levels (a 0.5% reduction). However, after taking into account:

1. Article 3.7—a special provision of the Kyoto Protocol that applies to Australia, allowing it to include deforestation emissions in 1990 its base year.^[6]
2. surplus units resulting from the first commitment period and
3. the CAT assessment of likely aggregate credits due to Kyoto land use change and land-use change and forestry (LULUCF) accounting rules,

Australia's allowed GHG emissions (excluding LULUCF) could be increased in 2020 to 23–48% above 1990 levels of GHG emissions excluding LULUCF (further details on this analysis in our [Australia report](#)).

Copenhagen 2020 Pledge

Under the Copenhagen Accord Australia has proposed three targets for 2020 with different conditions, -5%, -15%, and -25% relative to 2000. Australia has provided absolute allowed emissions levels in 2020 of 524 MtCO₂e, 468 MtCO₂e, and 413 MtCO₂e for the -5%, -15% and -25% targets respectively (these figures assume 5 MtCO₂e from ARD in 2020). The -5% goal currently stands as their unconditional pledge.

The Australian government has stated: "In defining its targets for 2020, Australia considered that these targets refer to its net emissions from the sector and source categories included in Annex A to the Kyoto Protocol as well as from afforestation, reforestation and deforestation activities, for the base year (2000) and 2020" (UNFCCC, 2014 and DCCEE, 2012)^[6]. The CAT estimates the Australia's unconditional Copenhagen pledge to reduce emissions by 5% below 2000 emissions by 2020 is equivalent to approximately 7% increase above 2000 levels which is equivalent to a 26% increase above 1990 levels of GHG emissions excluding LULUCF^[6] after taking into account Australia's inclusion of afforestation, reforestation and deforestation (ARD) emissions in year 2000 base level emissions and in the 2020 target year.

Since the Copenhagen pledge is non-legally binding there are no pre-existing rules as to which rule apply to this pledge. Some countries, like New Zealand indicate that they would use the same Kyoto Protocol rules to increase their allowed GHG emissions as illustrated in the previous chapter. If we apply this approach to the Copenhagen pledge, Australia could increase its GHG emissions (excl. LULUCF) by up to 22% above 2000 levels (equivalent to 45% increase above 1990 levels) and still officially meet its 5% reduction target.^[6]

Fair share

Effort Sharing

We rate Australia's INDC target for 2030 "inadequate." The "inadequate" rating indicates that Australia's commitment exceeds the capability emissions level for Australia in all effort-sharing proposals evaluated by the CAT. This means it is not consistent with limiting warming to below 2°C: if most other countries followed the Australia approach, global warming would exceed 3–4°C. For Australia, proposals based on acceptability lead to higher emissions allowances whereas approaches that focus on equal cumulative/equal per capita emission would require more stringent reductions. The 2020 Kyoto targets are also rated "inadequate."

Improvements in emissions per-capita and emissions intensity

A close look at intensity indicators, such as emissions intensity of GDP and emissions per capita, and their rate of improvement under the INDC and current policy projections scenarios, may reveal important trends that emissions alone cannot. Beyond the CAT effort-sharing ranges, comparing these intensity indicators trends among countries provides further insight into fairness and progress towards decarbonisation of national economies.

The Australian INDC target implies significant improvements in emissions per capita and emissions intensity (emissions per unit of GDP). The CAT assesses that to meet its 2030 target, emissions per capita would reach roughly 15 MtCO₂e, which would imply an annual reduction rate in emissions per capita of 2.4–2.9% between 2012 and 2030 (and an overall reduction of 40–46%^[6] below 2005 levels, Table 2). This is similar to efforts made by other developed countries, as for example the USA, over the same period, which are expected to reach emissions per capita of 13 MtCO₂e per capita in 2030 according to their INDCs,^[6] with an annual reduction rate of around 2.5–3% in emissions per capita (and an overall 48% compared to 2005 levels).

	Per capita emissions GHG emissions/population (tCO ₂ e/pers)			Annual rate of improvement in per capita emissions (%)			CAT rating
	1990	2005	2030	INDC	2012-2030	Current policy projections	
Australia	24	26	14-15	23-24	-2.9% to -2.4%	-0.1% to 0%	Inadequate
Canada	21	23	14	20	-1.9%	-0.1%	Inadequate
EU	12	10	6.4	7-8	-1.8%	-1.3% to -0.4%	Medium
Japan	10	11	9.1	10-11	-0.8%	-0.5% to 0%	Inadequate
New Zealand	18	19	11-13	17	-2.3% to -1.4%	-0.2%	Inadequate
Norway	12	12	3-5	9	-6.3% to -4%	-1.1%	Medium
Russia	23	15	22-24	21-21	1.9% to 2.2%	1.6% to 1.6%	Inadequate
Switzerland	8	7	3	3-4	-4.1%	-3.5% to -2%	Medium
USA	24	24	12-13	16-16	-3% to -2.5%	-0.5% to -0.4%	Medium

Table 2: Emissions per capita in 1990, 2005 and 2030 and annual rate of improvement in per capita emissions (%) between 2012–2030 for industrialised countries under INDC and Current Policy scenarios. Note that for the USA, 2030 levels result from the linear interpolation between the 2025 emissions levels implied by the INDC and the long-term target in 2050.

However, the picture is very different if current policy projections are considered instead of the INDC target. While current policies in the USA bring them to an emissions per capita level of 16 tCO₂e, current policy projections in Australia do not imply any improvement in emissions per capita from today's level (Table 2). It is important to note that since 1990, Australia's emissions per capita have been decreasing at a very slow pace (reductions of only 2% between 1990 and 2012), whether Australia will be able to achieve these reductions remains doubtful given the country's recent emissions trend and climate policy developments.

	Emissions intensity GHG emissions/GDP (tCO ₂ e/million USD2012)			Annual rate of improvement in emissions intensity (%)			CAT rating
	1990	2005	2030	INDC	2012-2030	Current policy projections	
Australia	651	664	228-279	426-427	-4.4% to -3.8%	-1.5% to -1.5%	Inadequate
Canada	868	551	252	314	-2.8%	-1.1%	Inadequate
EU	469	314	150	163-192	-3.0%	-2.6% to -1.7%	Medium
Japan	281	259	163	173-192	-2.3%	-2% to -1.4%	Inadequate
New Zealand	767	603	288-337	420	-3.7% to -2.9%	-1.7%	Inadequate
Norway	233	157	40-42	106	-7.4% to -5.2%	-2.3%	Medium
Russia	3495	2449	805-853	760-771	-1.9% to -1.5%	-2.2% to -2.1%	Inadequate
Switzerland	138	117	39	44-58	-4.6%	-4% to -2.5%	Medium
USA	662	484	171-186	224-223	-4.6% to -4.2%	-2.2% to -2.1%	Medium

Table 3: Emissions intensity in 2030 and annual rate of improvement in emissions intensity (%) between 2012–2030 for industrialised countries under INDC and Current Policy scenarios. Note that for the USA, 2030 levels result from the linear interpolation between the 2025 emissions levels implied by the INDC and the long-term target in 2050.

In terms of emissions intensity per GDP, currently implemented policies in Australia would lead to levels of 426 tCO₂e/million USD2012 in 2030 (Table 3), which represents a reduction of around 35% compared to 2005 levels. Intended levels with the INDC are of 252–279 tCO₂e/million USD2012, which represents an overall 58–62% reduction below 2005 levels^[6], and far below what currently implemented policies can achieve.

Current policy projections

Australia's current policies fall far short of the emissions reductions required to meet the 2030 target put forward in the INDC. Under current policies in place in Australia, total national GHG emissions excl. LULUCF are projected to rise to about 575 MtCO₂e by 2020 and 670 MtCO₂e by 2030, equivalent to an increase in emissions from 2005 levels (excl. LULUCF) of 19% and 27% by 2020 and 2030 respectively (when compared to 1990 levels (excl. LULUCF) this results in an increase of 39% and 61% respectively). To meet its 2030 emissions targets, Australian emissions should decrease by an average rate of 2% per cent until 2030; instead, with current policies, they are set to increase by an average rate of 1.5% per year.

The Australian Government's published INDC's [Fact Sheet](#) states that Australia's target is achievable with its Direct Action Plan. It presents several indicative emissions reductions sources and its abatement potential: the Emissions Reduction Fund and its Safeguard Mechanism are said to generate around 360MtCO₂e abatement, the National Energy Productivity Plan in total 248MtCO₂e (155MtCO₂e through energy efficiency and 93 through vehicle efficiency), Ozone and HFC measures are expected to generate 82MtCO₂e and lastly technology improvements and other sources of abatement are said to contribute another 207 MtCO₂e of abatement potential (Australian Government, 2015a).^[6]

While the Government plans to use Direct Action approaches to reduce Australia's emissions to meet its 2020 and 2030 targets, many of the listed policies in its fact sheet are not yet maturely developed, and it remains highly uncertain whether they will deliver the necessary emissions abatement to meet the targets. It is clear that all of these listed policies do not come close to the emissions reductions that would have been achieved under the core instruments of the national climate policy and legislation in the previous Government's Clean Energy Future package, such as the Carbon Pricing Mechanism and the Large Scale Renewable Energy Target (Parliament of Australia, n.d.), all of which the current Government has repealed or amended. According to the CAT the Clean Energy Future Package would have brought Australia roughly halfway closer to its target when compared to currently implemented policies.

Current policy projections (with all implemented, not planned policies) are expected to lead to an emissions level of 575MtCO₂e excluding LULUCF by 2020, that is, 39% above 1990 levels of GHG emissions (excl. LULUCF) by 2020. This is in line with the effective emissions allowances estimated by the CAT for 2020 (further details in Box 2), which are increased through the usage of various accounting rules and thus ultimately allow Australia's emissions to be 23–48% above 1990 levels. In other words, Australia may not need to do anything in terms of policies between now and 2020 to meet its Kyoto obligations, a situation that also prevailed for the first commitment period (2008–2012). Note again, this is merely due to a mechanical upkiting of allowed GHG emissions and not due to effective climate policies that actually decrease GHG emissions.

Our current policy projections are based on Australia's Emissions Projections 2014–15 published by the Department of Environment on March 2015, which include existing policies and measures with the exception of the Emissions Reduction Fund (ERF). Additionally, the CAT incorporates the Renewable Energy Amendment Act 2015, passed by the Australian Government on June 25, which reduces Australia's large-scale renewable energy target from 41,000 GWh to 33,000 GWh in 2020, as well as the potential abatement from the ERF until 2020, based on the results of the first auction, which took place in April 2015.

As the Energy Productivity Plan, presented in the Energy White Paper in April 2015 (Australian Government, 2015d), is still under development and not backed by any legal framework or policies, we do not include it in our assessment. Similarly, we abstain from any quantification of "technology improvements" at this point, as they would be highly speculative.

Contrary to what the government finds in its assessment (Australian Government, 2015b), the CAT finds the cumulative abatement task between has actually increased considerably over the years, reflecting the negative consequences of the repeal and amendments of key climate policies in recent years (Figure 1). Before the repeal, we assessed that Australia was on track to meet their target. This is no longer the case after the repeal: the CAT estimates that a cumulative abatement of 153 MtCO₂e between 2013 and 2020 remains. With the first commitment period surplus, and the credits from forestry in the second commitment period, we estimate Australia will hold over 157 MtCO₂e of emission allowances for the period 2013–2020. This exceeds the abatement task, and indicates that under the Kyoto protocol, little, if any, further by action is needed to meet the 2020 target. The lack of action in 2020 however creates a larger abatement task in the decade following.

For the whole period of 2013 and 2030, the CAT estimates an overall remaining cumulative task of 1514–1750 MtCO₂e (excluding LULUCF) under currently implemented policies. Before the repeal the abatement task was of 415–651 MtCO₂e (including LULUCF), that is, policies brought Australia two thirds of the way closer to its INDC target.

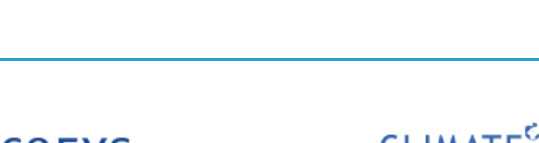


Figure 1: Comparison of the cumulative abatement task for Australia pre and post-repeal up to 2030 (excluding LULUCF sector).