

## Global climate action – September update: Australia submits initial post-2020 emissions reduction target while other countries are implementing policies to modernise their power sectors.

September 2015

Fifty six countries, including Australia, have submitted their initial emissions reductions targets to the United Nations as of 1 September, covering almost 60 per cent of global emissions.<sup>1</sup> Australia was the last of the developed economies to name its initial target, announcing a 26 per cent, and possibly 28 per cent, reduction on 2005 levels by 2030.

This target fails tests of both scientific credibility and economic responsibility. It does not align with the globally agreed goal of limiting warming to less than 2°C. If other countries took the same approach the world would warm by 3-4°C. The target is also bad for the economy and will leave Australia with the most pollution-intensive developed economy by 2030.

Table 1 gives a comparison of countries' initial targets. A full list of global policy updates is in Box 1 below.

Aside from outlining the most recent global developments, this monthly update includes a focus on the policies a number of countries are using to modernise their power sectors.

### No credible climate plan avoids cleaning up the power sector

Achieving the global goal of limiting warming to less than 2°C requires emissions from the energy sector to be net zero by around 2050.<sup>2</sup> Australia's power sector is among the most polluting in the world,<sup>3</sup> due to the dominance of aging, high-carbon coal generators. The energy sector (excluding transport) accounts for 57 per cent of Australia's emissions; emissions from the sector have shown the most growth between 1990 and today.<sup>4</sup> Other countries provide multiple examples of policies and regulations to bring down domestic energy emissions. As demonstrated below in Figure 1, existing policies are not capable of achieving even the proposed and inadequate post 2020 target.

The Emissions Reduction Fund as currently designed will only account for a sliver of the required reductions. Unless policies are implemented to clean up and

modernise Australia's power sector current and future emissions targets will not be achieved.

This update highlights some of the current power sector policies in play in the United States, Canada, the United Kingdom, and Germany. These countries and many others are already implementing a suite of effective domestic climate policies; in contrast the Australian government has said it will not be reviewing new policies until 2017 or 2018.<sup>5</sup>

#### *United States*

In early August, the US unveiled the final version of its Clean Power Plan. The plan is among the most significant US actions on climate to date. It sets new standards for power plants, which are the largest single source of emissions in the US.<sup>6</sup> Previously there was no limit on pollution from the sector, but now power stations must reduce their emissions by 32 per cent by 2030 (on 2005 levels).

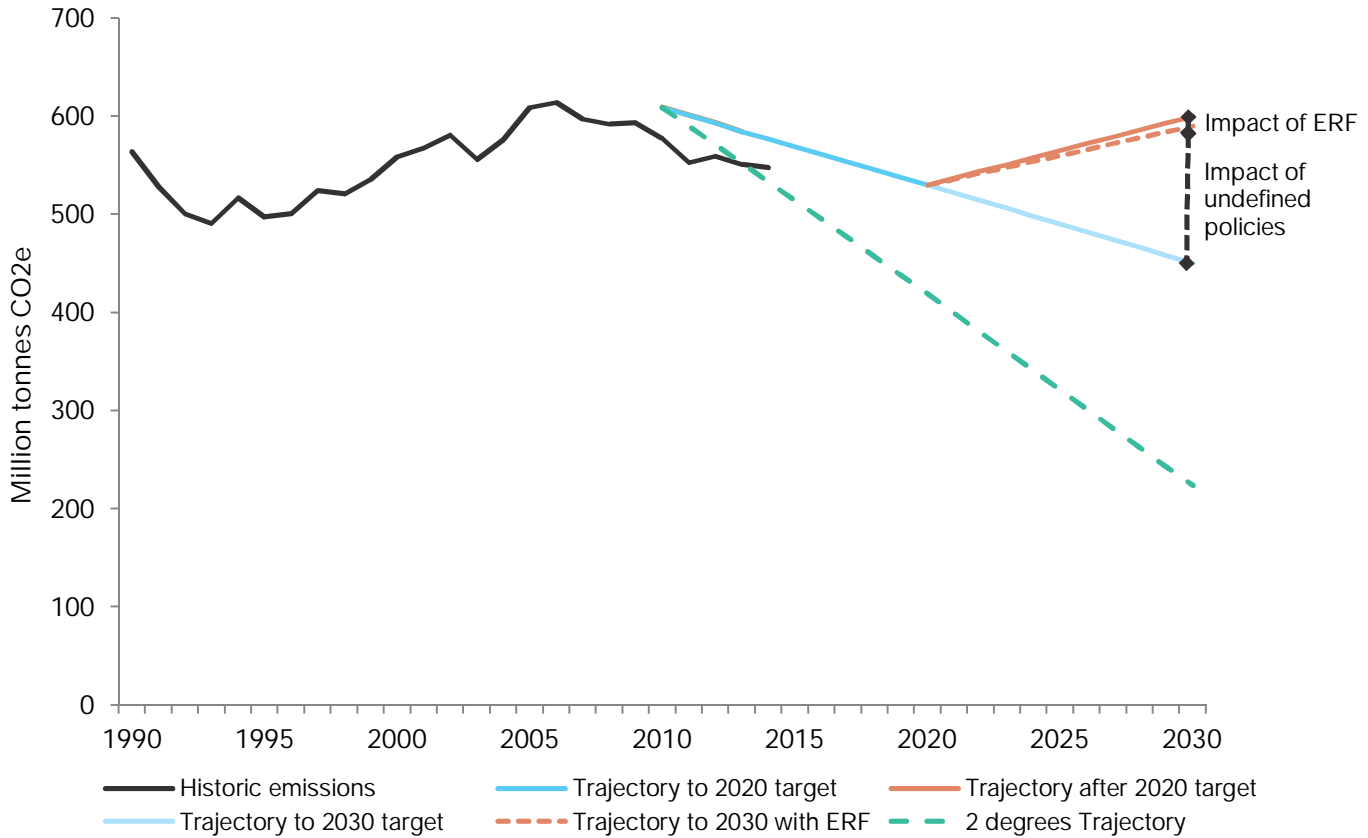
The plan includes a range of different options for meeting the reduction goal, from phasing out coal use to improving energy efficiency, and allocates a target to each state based on its capacity to take advantage of the different options.

In late August, the US Environmental Protection Agency (EPA) also proposed new rules to restrict methane emissions from new oil and gas wells. The proposed regulations aim to reduce methane emissions by 45 per cent by 2025 (on 2012 levels); an absolute reduction of up to 400,000 tonnes.<sup>7</sup>

#### *Canada*

Canada also regulates electricity generation emissions. The federal government has set requirements for coal power stations which came into effect on 1 July 2015. Once coal generators are 50 years old (or earlier in some cases), they must meet an emission limit of 420 tonnes of carbon dioxide per gigawatt hour (tCO<sub>2</sub>/GWh). This requires coal stations to retrofit carbon capture and storage technology or close down. At the provincial level, Ontario has

Figure 1: Graph shows Australia's historical emissions, the emissions pathway under the initial post-2020 target, and the <2°C goal emissions pathway. It highlights the projected impact the Emissions Reduction Fund towards meeting these pathways.<sup>8</sup>



implemented a much more forceful coal phase-out program, reducing its coal generation from 25 per cent of total supply to zero over the decade to 2014.

#### United Kingdom

In February, the three major parties in the UK put aside partisan differences and released a joint pledge to avoid global warming of 2°C by keeping to stringent carbon pollution limits and phasing out traditional coal power. The UK has also established Contracts for Difference to drive investment in clean technologies in its electricity sector. Through the program the government contracts for the provision of a certain amount of clean power generation.

Contracts for Difference reduce investment risk by guaranteeing government purchase of the power at a set “strike price”, set to cover the difference between the average market price for electricity and the cost of investing in a particular low-carbon technology. If the average market price of electricity rises above the cost of the investments, the investor pays the difference back to the government. These funds can then be reinvested in more clean energy projects.

Projects compete in an auction in order to receive a contract from two “pots” of money. The first is for “established” technologies and the second for “less established” technologies. The first Contracts for Difference auction for renewable capacity was held in

February 2015. Over 20 renewable energy projects have approved funding with a combined capacity of over two gigawatts. Over 60 per cent of the successful projects were wind farms.

In addition to participating in the EU emissions trading scheme the UK has also set a “top-up” carbon price of GBP 18 per tonne on electricity sector emissions. This is designed to bolster the weak carbon prices under the EU ETS.

#### Germany

In July 2015, the leaders of the parties forming government agreed to phase out the dirtiest brown coal power plants by 2021. Details and approval of the proposal are due before the end of the year. Brown coal, or lignite, produces the most emission-intensive coal power. Germany needs to phase out 2.7 gigawatts of brown coal capacity to ensure it meets its pollution reduction target of 40 per cent below 1990 levels by 2020. Rather than close these high-emitting power plants immediately, they will be paid to be held in reserve for four years from 2017. While in reserve they can be used in times of energy shortage, but will not be permitted to sell energy on the market at other times. This proposal emerged as a compromise deal between industry, unions and the government. It is likely to be a relatively high cost way to reduce emissions from these power stations.

Table 1: Comparing Australia's post-2020 target to that of other developed economies. The measures shown are annual rate of emissions reductions, per capita emissions in 2030, and emissions intensity in 2030. It also compares the different countries on a range of base years, to allow for a like for like comparison.

Dark red is worst among developed countries. Light red is in worst three. Blue is best among developed countries.							
	Is it consistent with 2°C? Grey is NO. Green is credible pathways to 2°C exist*	Annual rate of emissions reductions	Per capita emissions (t CO2e)	Emissions intensity (kt CO2e/GDP PPP)	Change on base year		
		post-2020	2030	2030	2005	2000	1990
Australia (26% by 2030)	NO	-1.6%	16	198	-26%	-19%	-20%
Canada	NO	-1.6%	14	190	-30%	-18%	+6%
EU	POSSIBLE	-2.6%	8	104	-34%	-33%	-40%
Germany	NA	-2.6%	7	89	-45%	-46%	-55%
Japan	NO	-2.4%	8	134	-25%	-25%	-19%
New Zealand**	NO	-0.5%	11	175	-30%	-23%	-10%
Norway	POSSIBLE	-1.5%	4	41	-18%	-20%	-40%
Excluding LULUCF		-1.5%	5	51	-44%	-44%	-40%
Switzerland	POSSIBLE	-4.1%	3	32	-51%	-51%	-50%
UK	NA	-5.1%	5	74	-49%	-51%	-64%
USA	POSSIBLE	-2.3%	11	113	-39%	-40%	-29%
Average (excluding Australia)		-2.5%	8	116	-36%	-36%	-35%

Notes: NA - Not applicable as country is part of the EU and independent assessments of their contribution to the 2°C goal have not been undertaken. \* Consistent on some assessments - credible pathways to 2°C exist, high probability of avoiding 2°C requires an acceleration of effort to 2050. \*\* Excluding LULUCF

#### BOX 1: Global policy updates

- + The US unveils its Clean Power Plan, which stipulates that emissions from power plants must be reduced by 32 per cent from 2005 levels by 2030.
- + India holds its largest solar power auction to date. Contracts were awarded for 2000 megawatts of solar farm capacity.
- + Monaco submits its post-2020 target to the UN - it will reduce emissions by 50 per cent on 1990 levels by 2030
- + Macedonia announces its post-2020 targets. It will reduce emissions from fossil fuels by 30-36 per cent by 2030 from business as usual levels.
- + Trinidad and Tobago submits its post-2020 target. It will reduce emissions by 15 per cent by 2030 from business as usual levels. The target covers the energy, transport and industrial sectors.
- + Benin announces it will reduce emissions by 120 MtCO2e by 2030.
- + Australia submits its initial post-2020 target to the UN - it will reduce emissions by at least 26 per cent (and possibly 28 per cent) from 2005 levels by 2030.
- + Djibouti announces it will reduce emissions by 40 per cent by 2030 from business as usual levels.
- + The Democratic Republic of the Congo announces it will reduce emissions by 17 per cent from business as usual levels by 2030.
- + The Dominican Republic submits its post-2020 target to the UN - it will reduce emissions by 25 per cent from 2010 levels by 2030.
- + Islamic leaders around the world release an Islamic Declaration on Climate Change. The Declaration calls on the world's 1.6 billion Muslims to work towards phasing out emissions by 2050 and support a 100 per cent renewable energy strategy.
- + Brazil and Germany release a joint statement on climate, with Brazil backing the G7 goals for decarbonisation by the end of this century. Brazil also pledges to reduce deforestation in the Amazon to zero by 2030.

#### ENDNOTES

- <sup>1</sup> World Resources Institute, 2015, 'CAIT Climate Data Explorer: INDCs', <http://cait.wri.org/indc>
- <sup>2</sup> Intergovernmental Panel on Climate Change, 2014, 'Climate Change 2014: Synthesis Report' IPCC, Geneva.
- <sup>3</sup> International Energy Agency, 2013, 'CO2 Emissions from Fuel Combustion Highlights', IEA/OECD, Paris.
- <sup>4</sup> Department of the Environment, 2015, 'Quarterly Update of Australia's National Greenhouse Gas Inventory', Commonwealth of Australia, Canberra.
- <sup>5</sup> Media release from the Prime Minister The Hon. Tony Abbott's office on Australia's 2030 Emissions Reduction Target - <http://www.pm.gov.au/media/2015-08-11/australias-2030-emissions-reduction-target>
- <sup>6</sup> UN Framework Convention on Climate Change, 2014, 'Biennial Report of the United States of America', UNFCCC, Bonn, Germany.
- <sup>7</sup> US EPA, 2015, 'Proposed Climate, Air Quality and Permitting Rules for the Oil and Natural Gas Industry: Fact Sheet' - [http://www.epa.gov/airquality/oilandgas/pdfs/og\\_fs\\_081815.pdf](http://www.epa.gov/airquality/oilandgas/pdfs/og_fs_081815.pdf)
- <sup>8</sup> The pathways assume straight-line reductions from previous Kyoto target, to minimum 2020 emissions and then initial post-2020 target offer. Emissions in the absence of additional policy after 2020 and the impact of the Emissions Reductions Fund are based on government estimates.