

# WENTWORTH GROUP

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OF CONCERNED SCIENTISTS

**Submission to the  
Senate Standing Committee on Environment and Communication  
Inquiry into the Clean Energy Legislation (Carbon Tax Repeal) Bill  
2013 and related bills**

25 November 2013

## WENTWORTH GROUP OF CONCERNED SCIENTISTS

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### Submission to the Senate Standing Committee on Environment and Communication Inquiry into the Clean Energy Legislation (Carbon Tax Repeal) Bill 2013 and related bills

This submission is with respect to the Clean Energy Legislation (Carbon Tax Repeal) Bill 2013, specifically Schedule 1 that repeals the *Clean Energy Act 2011* and related legislation.

#### 1. Climate change is real and it is extremely likely that it is caused by humans.

The latest Intergovernmental Panel on Climate Change report on the physical science, released on the 30 September, 2013 has concluded that *“warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia”,* and that *“it is extremely likely (>95 per cent) that human influence has been the dominant cause of the observed warming since the mid-20th century”*.<sup>1</sup>

Without significant global action in the immediate future to reduce greenhouse emissions, average global temperatures are projected to rise between 2 and 3.2 degrees above pre-industrial levels within the next 30 to 50 years (Table 1).

**Table 1:  
Projected change in global mean surface air temperature and global mean sea level rise relative to reference period 1850-1900**

Variable	Scenario	2046-2065			2081-2100		
		mean	likely range		mean	likely range	
Global Mean Surface Temperature Change (°C)	RCP2.6	1.6	1.0	to 2.2	1.6	0.9	to 2.3
	RCP4.5	2.0	1.5	to 2.6	2.4	1.7	to 3.2
	RCP6.0	1.9	1.4	to 2.4	2.8	2.0	to 3.7
	RCP8.5	2.6	2.0	to 3.2	4.3	3.2	to 5.4
Variable	Scenario	mean	likely range		mean	likely range	
Global Mean Sea Level Rise (m)	RCP2.6	0.43	0.36	to 0.51	0.59	0.45	to 0.74
	RCP4.5	0.45	0.38	to 0.52	0.66	0.51	to 0.82
	RCP6.0	0.44	0.37	to 0.51	0.67	0.52	to 0.82
	RCP8.5	0.49	0.41	to 0.57	0.82	0.64	to 1.01

Based on Summary for Policy Makers (SPM) Table SPM.2 (page 25), IPCC Working Group I Fifth Assessment Report, 30 Sept 2013. To adjust for the change in reference period from 1986-2005 used in Table SPM.2 to the reference period 1850-1900, 0.61C has been added to all global mean surface temperature change values (see Note (a) of Table SPM.2) and 0.19m has been added to all global mean sea level rise values (see Fig SPM.3 and SPM section B4).<sup>2</sup>

#### 2. It is in Australia’s national interest to support a global agreement to limit temperature increases to no more than two degrees above pre-industrial levels.

Australia is one of the most vulnerable countries to climate change and is already experiencing the impacts of more frequent and severe extreme weather. The 2011 Australian State of the Environment report has identified climate change as a clear and present threat to Australia’s ecosystems.<sup>3</sup>

During the past 50 years, Australia has experienced increases in hot days, heavy rainfall events, very high fire danger and reductions in cold extremes.<sup>4</sup> These trends point to the potential for

very serious negative impacts on the condition of our natural resources (soil, water, biodiversity and coastal zone) and the human communities that depend on the ecosystem services provided, over the period to 2070 and beyond.<sup>5</sup> These trends are predicted to continue and to increase in magnitude due to increasing greenhouse gas emissions.

Without early, vigorous and ongoing mitigation measures, there is a high probability of more severe climate change and the associated risk of higher rates of biodiversity loss in the coming decades and centuries, which will undermine the most effective adaptation measures.<sup>6</sup>

### 3. Limiting global warming to less than 2 degrees will require Australia to commit to substantial emission reduction targets.

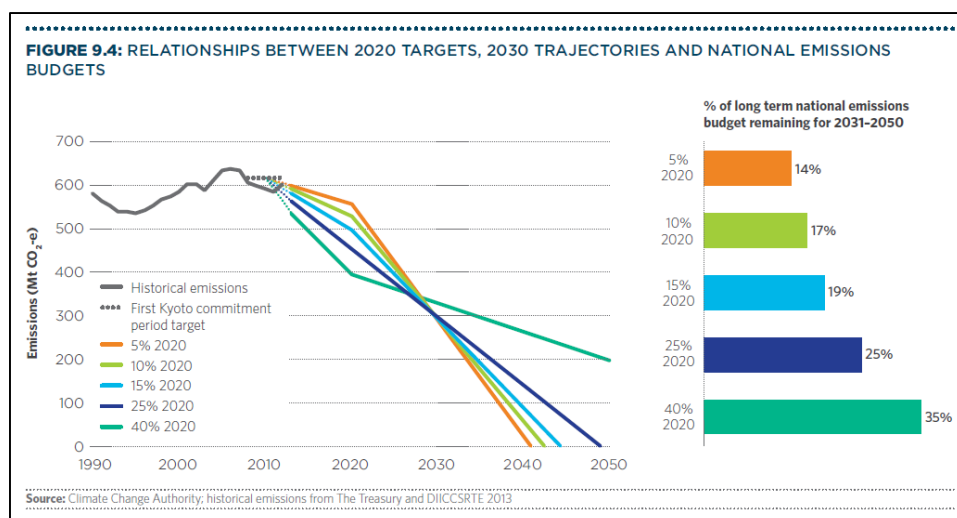
The international community, of which Australia forms a part, has recognised that deep cuts in global greenhouse gas emissions are required according to science and that there is a need to limit the increase in global average temperature compared with pre-industrial levels below 2 degrees.<sup>7</sup>

For the world to have a 67 per cent chance of reaching this target and thus avoiding dangerous climate change, the global carbon budget is 1700 000 million tonnes of carbon dioxide equivalent (Mt CO<sub>2</sub>-e) between 2000 and 2050.<sup>8</sup> Approximately 35 per cent of this budget has already been used between 2000 and 2012.<sup>9</sup>

According to the Australian Climate Change Authority, to stabilise the global average temperature at below 2 degrees warming, an equitable emissions budget for Australia is 10 100 Mt CO<sub>2</sub>-e between 2013 and 2050.<sup>10</sup> Based on this budget, the Authority states that:

1. A 5 per cent emissions reduction target for 2020 'requires an implausibly rapid acceleration of effort between 2020 and 2030 to remain within the long term budget';<sup>11</sup>
2. A 15 per cent emissions reduction is the 'minimum 2020 target that can be credibly combined with the recommended budget' as it would 'require some acceleration after 2020';<sup>12</sup> and
3. A 25 per cent emissions reduction target for 2020 'sets a pace that needs to be maintained', not accelerated, through to 2050 and would 'keep open the possibility of pursuing a stronger 2050 budget or a lowering warming limit in the future' (Figure 1).<sup>13</sup>

**Figure 1:**  
**Australian Climate Change Authority advice on**  
**Australia's Emissions Budget to 2050<sup>14</sup>**



In other words, Australia's contribution to such a target would require a reduction of well in excess of 80 per cent by 2050.

The design of any short term climate mitigation action by Australia should, therefore be capable of making a meaningful contribution to such a global agreement to stabilise global temperatures below 2 degrees above pre-industrial levels, at least cost to the economy.

**4. We can find no evidence that the government's Direct Action Policy is capable of achieving such a target.**

Achieving the scale of emissions reductions to avoid dangerous climate change will require a range of institutional responses. All such policy decisions should be informed by the best information from relevant experts, including scientists and economists.

The Wentworth Group accepts the advice of economic experts, including the Australian Productivity Commission,<sup>15</sup> that an emissions trading scheme is by far the most cost effective way for Australia to contribute to global efforts to mitigate climate change.

For this reason the Wentworth Group does not support the Clean Energy Legislation (Carbon Tax Repeal) Bill 2013, unless it is replaced by other mechanisms that are capable of achieving the scale of emissions required to make our contribution to stabilising global temperatures below 2 degrees above pre-industrial levels, including a broad based national emissions trading scheme. It is also important to retain an independent statutory authority to provide oversight of progress on Australian emissions reductions and advice to the government and the Parliament on targets for Australian emission reductions.

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<sup>1</sup> IPCC (2013) *Climate Change 2013: The Physical Science Basis*. Working Group 1 Contribution to the IPCC Fifth Assessment Report. 30 September, 2013

<sup>2</sup> IPCC (2013) *Change 2013: The Physical Science Basis*. Summary for Policymakers. Working Group 1 Contribution to the IPCC Fifth Assessment Report. 30 September, 2013.

<sup>3</sup> State of the Environment 2011 Committee. Australia State of the Environment 2011. Independent report to the Australian Government Minister for Sustainability, Environment, Water Populations and Communities. Canberra, DSEWPac, 2011, p 112.

<sup>4</sup> Climate Change Authority (2013) *Reducing Australia's Greenhouse Gas Emissions – Targets and Progress*, Draft Report. October 2013, Section 2.2.1, pp 28-30.

<sup>5</sup> Wentworth Group submission to the Inquiry into recent trends in and preparedness for extreme weather events.

<sup>6</sup> The Productivity Commission has recommended that reforms to remove barriers to effective climate change adaptation that can deliver net benefits should be implemented without delay: Productivity Commission, *Inquiry Report: Barriers to effective climate change adaptation*, March 2013, recommendation 5.1.

<sup>7</sup> UNFCCC agreement in Cancun 2010, Decision 1/CP.16, para 4, <[http://unfccc.int/key\\_steps/cancun\\_agreements/items/6132.php](http://unfccc.int/key_steps/cancun_agreements/items/6132.php)>.

<sup>8</sup> Climate Change Authority (2013) *Reducing Australia's Greenhouse Gas Emissions – Targets and Progress*, Draft Report. October 2013, p 44.

<sup>9</sup> Climate Change Authority (2013) *Reducing Australia's Greenhouse Gas Emissions – Targets and Progress*, Draft Report. October 2013, p 44.

<sup>10</sup> Climate Change Authority (2013) *Reducing Australia's Greenhouse Gas Emissions – Targets and Progress*, Draft Report. October 2013, p 103.

<sup>11</sup> Climate Change Authority (2013) *Reducing Australia's Greenhouse Gas Emissions – Targets and Progress*, Draft Report. October 2013, p 104.

<sup>12</sup> Climate Change Authority (2013) *Reducing Australia's Greenhouse Gas Emissions – Targets and Progress*, Draft Report. October 2013, pp 104,105.

<sup>13</sup> Climate Change Authority (2013) *Reducing Australia's Greenhouse Gas Emissions – Targets and Progress*, Draft Report. October 2013, pp 104,105.

<sup>14</sup> Climate Change Authority (2013) *Reducing Australia's Greenhouse Gas Emissions – Targets and Progress*, Draft Report. October 2013, p 104.

<sup>15</sup> Productivity Commission 2011, *Carbon Emission Policies in Key Economies*, Research Report, Canberra.