

**I am making a personal submission**

**Name:** Mr Geoffrey Miell  
**Suburb:** LITHGOW  
**State:** NSW  
**Postcode:** 2790  
**Political Donations:** No  
**Agree to Terms/Conditions:** Yes  
**My view on the application:** **I object to it**

**Message:** To Whom It May Concern,

The Paris Climate Agreement, although flawed, locks-in the end of coal. Such a geopolitical agreement could not have been reached in the absence of the growing civil society and market signals that coal's demise was already happening.

The proposed APC-MOD6 fosters the continued long-term operation of Mt Piper Power Station (MPPS), facilitating ongoing greenhouse gas (GHG) emissions through the combustion of carbon-based substances, that **contributes to escalating the risk of civilisation collapse within this century.**

Overwhelming scientific evidence unequivocally links human-caused climate change to the increasing risk of frequent and severe bushfires in the Australian landscape. That same science tells us these extreme events will only grow worse in the future without genuine concerted action to rapidly reduce global emissions of GHGs.<sup>1</sup>

**Humanity must stop burning all carbon-based substances as soon as possible.** MPPS should cease operations by no later than 2030, and certainly long before reaching its intended operational design life of 50 years (or in year-2043),<sup>2</sup> rendering any other associated projects, like the proposed APC-MOD6, unviable in the longer-term.

Please see the following pages for more detailed information.

**The proposed APC-MOD6 must be denied; otherwise, it contributes to an immediate existential threat to human civilisation** and conflicts with Australia's commitments given in the Paris Climate Agreement to make substantial reductions to our carbon-based emissions.

You may publish this entire document. Please don't publish my contact details.

Thank you for the opportunity for me to present my views on this critical issue.

Geoff Miell

**Lodged:** 2020 Dec 14

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<sup>1</sup> <https://australianbushfiresandclimatechange.com/>

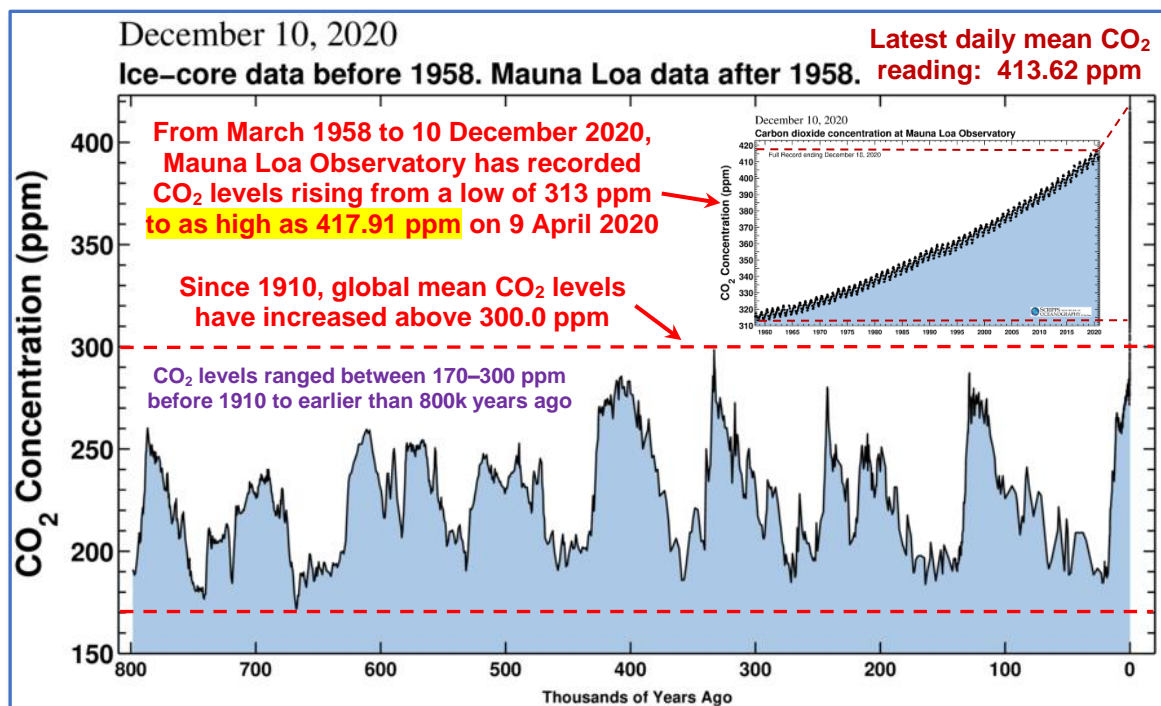
<sup>2</sup> **EnergyAustralia paves way for NSW coal power upgrade**, by Angela Macdonald-Smith, *AFR*, 8 Jul 2019, <https://www.afr.com/companies/energy/energyaustralia-paves-way-for-nsw-coal-power-upgrade-20190705-p524ml>

## Today's CO<sub>2</sub> levels far exceed any present on Earth for >800k years

In 1958, Charles David Keeling of Scripps Institution of Oceanography began measuring atmospheric CO<sub>2</sub> concentrations at Hawaii's Mauna Loa Observatory.

Keeling discovered a seasonal cycle of minimum and maximum concentrations as plants grew in spring and died back in autumn. He also detected a steady increase that he attributed to the use of fossil fuels. The chart depicting that rise is known as the Keeling Curve.

**Ice core data reveal that today's atmospheric CO<sub>2</sub> levels far exceed any present on Earth for more than the last 800,000 years (see Figure 1 below).**



**Figure 1: Atmospheric CO<sub>2</sub> Concentrations – 800,000 years ago to 10 Dec 2020<sup>3</sup>**

The last time planet Earth's atmosphere was so rich in CO<sub>2</sub> was millions of years ago, back before early predecessors to humans were likely wielding stone tools; the world was a few degrees hotter, and sea levels were tens of metres higher.

While Mauna Loa has become the global standard for CO<sub>2</sub> levels, measurements taken in other places have confirmed the Mauna Loa results. NOAA's network of marine surface stations, and even a monitoring station in remote, pristine Antarctica, **all passed the 400 parts per million (ppm) threshold in 2016.**<sup>4</sup> NASA's Orbiting Carbon Observatory-2 satellite shows the planet's CO<sub>2</sub> levels now above 400 ppm, with variations from one place to another, thanks to atmospheric circulation patterns.

<sup>3</sup> Accessed 13 Dec 2020, <https://scripps.ucsd.edu/programs/keelingcurve/pdf-downloads/>; Global Mean CO<sub>2</sub> Mixing Ratios (ppm): Observations, <https://data.giss.nasa.gov/modelforce/ghgases/fig1A.ext.txt>

<sup>4</sup> How the World Passed a Carbon Threshold and Why It Matters, by Nicola Jones, *YaleEnvironment360*, 26 Jan 2017, <https://e360.yale.edu/features/how-the-world-passed-a-carbon-threshold-400ppm-and-why-it-matters>

## Where on Earth is humanity heading: Pliocene or Miocene climate?

On 17 November 2018, Professor H. J. Schellnhuber CBE, then Director Emeritus of the Potsdam Institute for Climate Impact Research, Member of the Pontifical Academy of Sciences, and Member of the German Advisory Council on Global Change, presented his Aurelio Peccei Lecture in Rome, Italy, titled “Climate, Complexity, Conversion”.<sup>5</sup> At the beginning of his lecture, Professor Schellnhuber refers to a co-authored scientific paper titled *Trajectories of the Earth System in the Anthropocene*<sup>6</sup> that he described as a “**landmark paper**” and a “**game-changer**”. From about time interval **0:23:23 through to 0:26:45**, Professor Schellnhuber outlines two (2) Earth climate state possibilities that **humanity could experience within this century**, dependent upon the global human-induced greenhouse gas (GHG) emission trajectory path that ensues within this decade (i.e. the 2020s), namely Options:

- A. A harsher climate state paradigm may be like in the **Mid-Pliocene age**, that occurred **3–4 million years ago**, where atmospheric CO<sub>2</sub> levels were in the range of **400–450 ppm**, mean global temperatures were **+2.0–3.0 °C** (above pre-industrial age), and sea levels were **+10–22m higher than today** (stabilised over centuries), but requires humanity to rapidly reduce human-induced global GHG emissions now (i.e. >50% reduction by 2030, and to zero by 2040).<sup>7</sup>
- B. The alternative highly undesirable climate state may be like in the **Mid-Miocene age**, that occurred **15–17 million years ago**, atmospheric CO<sub>2</sub> levels were in the range of **300–500 ppm**, mean global temperatures were **+4.0–5.0 °C**, and sea levels were **+10–60m higher** (stabilised over centuries), **which is likely with our current global GHG emissions trajectory**.

Humanity and human civilisation **might adapt** to Option A – Mid-Pliocene climate like conditions, but **human civilisation (as we know it) is highly likely to collapse in Option B – Mid-Miocene climate like conditions**, with a global population likely declining below one billion people before 2100.<sup>8</sup>

A 1 °C global mean temperature rise (above pre-industrial age) means the emergence of dangerous climatic conditions; 2 °C means the onset of “**extremely dangerous**” climatic conditions; 3 °C means “**outright chaos**”; and 4 °C means “**incompatible with organised global community**”.<sup>9</sup>

**Humanity must stop emitting GHGs: >50% reduction by 2030; zero before 2040.**

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<sup>5</sup> *Keynote Debate Can the Climate Emergency Action Plan lead to Collective Action\_ (50 Years CoR)*, from time interval **0:05:31 to 0:40:20**, Club of Rome, <https://www.youtube.com/watch?v=QK2XLeGmHtE>

<sup>6</sup> *Trajectories of the Earth System in the Anthropocene*, by Will Steffen, Johan Rockström, Katherine Richardson, Timothy M. Lenton, Carl Folke, Diana Liverman, Colin P. Summerhayes, Anthony D. Barnosky, Sarah E. Cornell, Michel Crucifix, Jonathan F. Donges, Ingo Fetzer, Steven J. Lade, Marten Scheffer, Richarda Winkelmann, and Hans Joachim Schellnhuber, published in the *Proceedings of the National Academy of Sciences of the United States of America* (PNAS), vol. 115, no. 33, pp8252-8259, online on 6 Aug 2018, <http://www.pnas.org/cgi/doi/10.1073/pnas.1810141115>

<sup>7</sup> *Existential climate-related security risk: A scenario approach*, by David Spratt and Ian Dunlop, published by Breakthrough – National Centre for Climate Restoration, May 2019 (updated 11 June 2019), <https://www.breakthroughonline.org.au/papers>

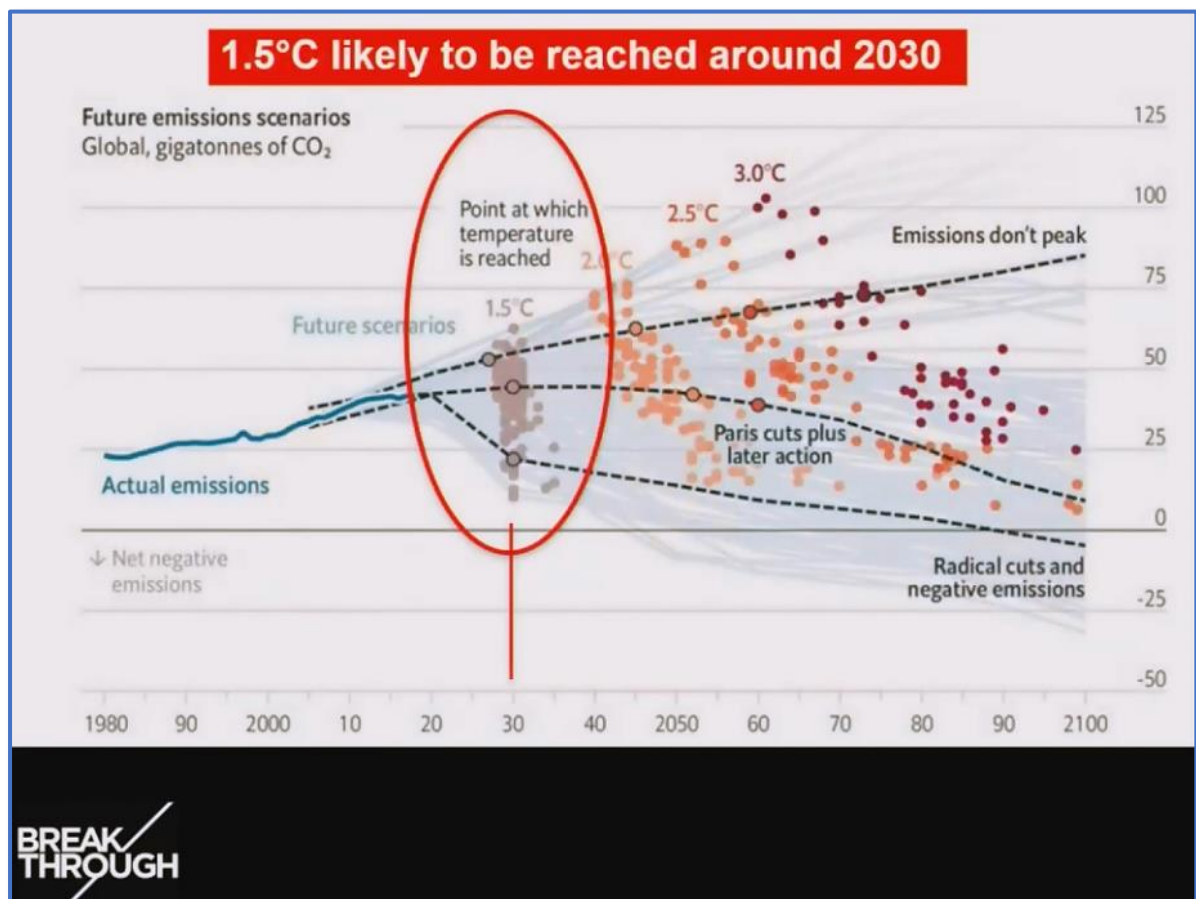
<sup>8</sup> <http://www.climatecoded.org/2019/08/at-4c-of-warming-would-billion-people.html>

<sup>9</sup> *Ibid.* 5, presentation by Ian T. Dunlop from about time interval **1:32:55 through to 1:42:20**

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## 1.5 °C temperature rise likely to be reached around 2030, or sooner

On 14 February 2020, David Spratt, Research Director at Breakthrough – National Centre for Climate Restoration, made a presentation to the opening plenary, “The New Climate Reality Check”, at the National Climate Emergency Summit 2020 at the Melbourne Town Hall.<sup>10</sup> Spratt highlighted that the world has a short-run problem, where a 1.5 °C global temperature rise above pre-industrial age is likely to be just a decade away, as a consequence of past GHG emissions already in the atmosphere.



**Figure 2: Future emissions scenarios, temperature rise and timings up to 2100<sup>11</sup>**

1.5 °C is dangerous, close at hand (see Figure 2 above), and now practically impossible to avoid, as there is no carbon budget remaining for 1.5 °C.

To stay below 2 °C, itself far from safe, requires global emissions to be more than cut in half in the next ten years, and much more in the high-emitting rich nations like Australia. **This means the proposed APC-MOD6 must not proceed.**

Climate disruption is now an existential threat to our civilisation as we know it today. This is an emergency requiring everyone making climate the primary priority of economics and politics, because slow, incremental change now means we are losing.

**Australia must prepare for the consequences of an inevitable 1.5 °C rise by 2030.**

<sup>10</sup> <https://www.climateemergencysummit.org/full-program/>

<sup>11</sup> <http://www.climatecoded.org/2020/02/a-climate-reality-update-at-2020.html>



## Climate Reality Check 2020

A report titled *Climate Reality Check 2020*,<sup>12</sup> by Ian Dunlop and David Spratt, published in October 2020, draws together current climate research from around the world and presents 20 critical observations, insights and understandings, including:

1. Warming is currently approaching 1.2 °C and accelerating;
2. 1.5 °C warming is likely by 2030, perhaps even earlier;
3. Reducing GHG emissions alone will have no significant effect on the warming trend over the next two decades;
4. Likely 1.75–2.4 °C of warming is ‘locked-in’ from GHG emissions already in the atmosphere;
5. On current GHG emissions trajectory, 2 °C warming is likely well before 2050;
6. The IPCC reports seriously underestimate future climate impacts;
7. 1.5 °C is not a safe target;
8. 2 °C is very dangerous;
9. The world is on a 3–5 °C warming path by 2100, that’s “*incompatible with an organised global community*”;
10. 2 °C may trigger a “Hothouse Earth” scenario of self-reinforcing warming;
11. 3 °C of warming would be catastrophic;
12. Climate history previews our hot future;
13. **These risks are existential for human civilisation;**
14. **These risks are existential for nature too;**
15. **Sensible risk-management requires special attention be given to high-end possibilities;**
16. **Zero GHG emissions are required at emergency speed: 2030 – not 2050 – is the crucial time-frame;**
17. **The Earth is already too hot: large-scale carbon drawdown is vital;**
18. **A safe means of immediate cooling is critical to protect people & nature;**
19. **Adaptation is vital, and should protect the most vulnerable, but is no substitute for deep climate mitigation;**
20. **The collapse of civilisation is not inevitable, but emergency-level action right now is critical.**

Professor Schellnhuber said in an interview late last year:<sup>13</sup>

*“On the one hand, I also once said, it’s worth fighting for every tenth of a degree, ja... because even if we would overshoot the two degrees line, ja... then, er... still we could avoid even worse impacts if we would, er... actually try to stop global warming at two-point-three, instead of four, or five or six, or eight degrees...”*

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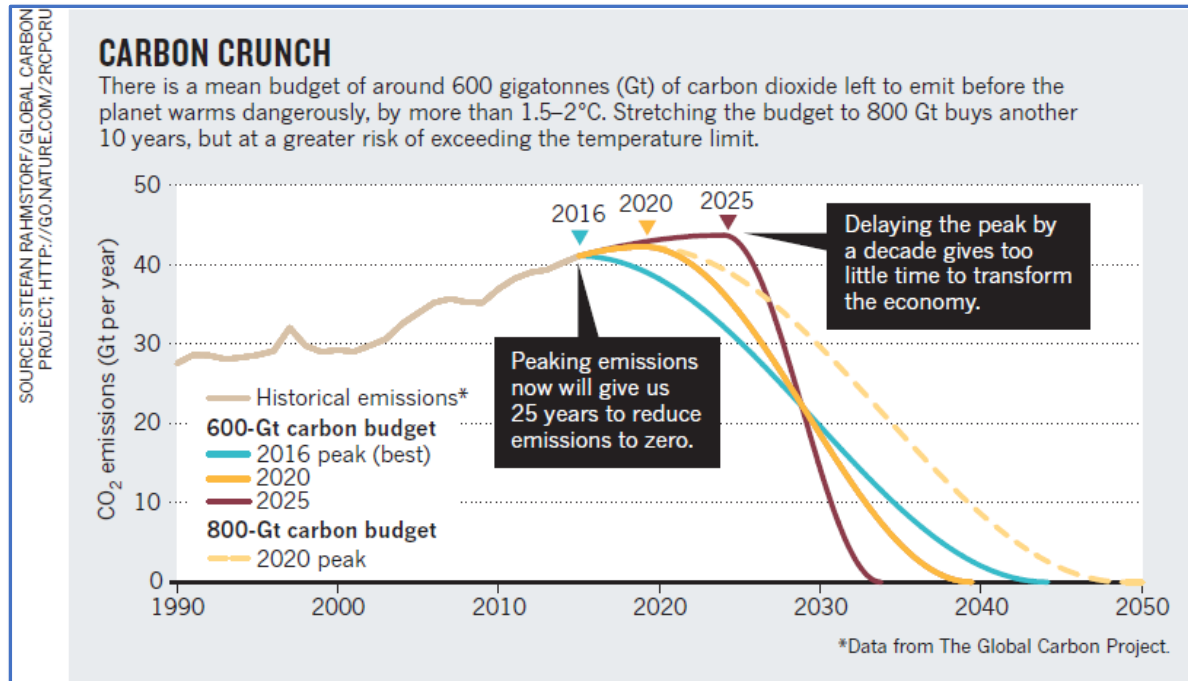
<sup>12</sup> **Climate Reality Check 2020**, by Ian Dunlop and David Spratt, published by Breakthrough – National Centre for Climate Restoration, Oct 2020, <https://www.climaterealitycheck.net/>

<sup>13</sup> **Prof. Michael Sterner’s interview with Prof. John Schellnhuber**, duration 16:19, by Scientists for Future, 26 Jan 2020, from about time interval 01:30, <https://www.youtube.com/watch?v=4PTRTw3wrg>

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## Rapidly dwindling carbon budget remaining to safeguard climate

On 28 June 2017, *Nature* published a commentary **Three years to safeguard our climate** by Christiana Figueres et. al., including Figure 3 below.



**Figure 3: Carbon Crunch – only a few years remaining to safeguard climate<sup>14</sup>**

On 24 Nov 2019 at the Bowral Memorial Hall, Club of Rome Member Ian Dunlop said:

***“Now, you know, if you get on an aircraft to fly to Melbourne, you don’t expect a 50:50 chance of getting there, or a 60% chance – you wouldn’t do it! So why it is we are prepared to gamble the future of human civilisation on a 50:50 chance of achieving it – this is crazy stuff!”<sup>15</sup>***

Ian Dunlop then presented a graph showing the probability of success of keeping below 2 °C.<sup>16</sup> For 90% chance of success, we/humanity have already used up the carbon budget. The carbon budgets for 66%, 50% and 33% chance are also shown. The graph shows the urgency of getting off fossil fuels as soon as possible.

These issues highlighted and discussed by Ian Dunlop in the referred presentation are not apparently well known by the general community, and many well-meaning people are glibly advocating “net-zero GHG emissions by 2050” without fully understanding that that goal has a much higher probability of not succeeding in meeting the Paris target of keeping “well below 2 °C” and the grave consequences associated with it.

<sup>14</sup> **Three years to safeguard our climate**, by Christiana Figueres, **Hans Joachim Schellnhuber**, Gail Whiteman, **Johan Rockström**, Anthony Hopley & **Stefan Rahmstorf**, in *Nature*, 28 Jun 2017, <https://www.nature.com/news/three-years-to-safeguard-our-climate-1.22201>

<sup>15</sup> **Ian Dunlop - Guest Speaker at the Bowral Climate Forum**, duration 26:06, by WinZero Wingecarribee, from time interval 12:40 to 12:58, <https://www.youtube.com/watch?v=68k4iRVvu8A>

<sup>16</sup> *Ibid.* <sup>15</sup>, from time interval 12:58 to 14:21

## **Professor Will Steffen: Why we are facing a climate emergency**

Professor Will Steffen is an Earth System scientist, and he is a Councillor on the publicly-funded Climate Council of Australia that delivers independent expert information about climate change. In April 2020, Professor Steffen made an online presentation<sup>17</sup> on why humanity (and all life) is facing an emergency.

From time interval **0:18:21 through to 0:24:26**, Will Steffen talked about potential ‘tipping points’ that could drive the Earth’s climate to a “Hothouse” state beyond human adaptation and control.

From time interval 0:37:51, Will Steffen outlined:

### **A COVID-19 type Response to Climate Change: Flattening the Curve:**

- **From 2020:** No new fossil fuel developments of any kind (coal, gas, and oil);
- **By 2030:** >50% reduction in GHG emissions; 100% renewable energy;
- **By 2040:** Reach net-zero GHG emissions – **NET-ZERO BY 2050 is now TOO LATE to avoid catastrophic climate change.**

## **What a 2 °C global mean temperature rise means for Australia**

Posted at Climatic Collective on November 22 was a podcast titled **David Spratt talks about ‘Climate Reality Check 2020’**.<sup>18</sup> David Spratt said (from time interval 06:56):

*“Well, this is abstract... I think, I think this becomes very abstract. They say: ‘We’ve got an agreement come out of Paris about how we’re are going to keep to 1.5 to 2.’ And then they repeat all the political talking points – the dot points around 1.5 to 2 – and none of them ever actually really think or look at the evidence and go: ‘Well, ah... 1.5 is now less than a decade away, it’s locked-in to the system, unless we were to do some dramatic cooling, which is not on the agenda, we are going to fly past 1.5’. I mean, every day, I see politicians say: ‘Yes, we are committed!’ – big companies: ‘We are committed to the Paris goals of 1.5’. And in reality, they are not in the same ballpark!”*

Later (from time interval 08:38):

*“Maybe we need to talk less about numbers and more, and more about the consequences. I mean, one scientist was saying to me the other day that, if you get 2 degrees of global average warming – people say 2 isn’t very much – in a place like Australia, in the, in the really dry, arid ah... areas, the hottest days in heatwaves won’t be 2 degrees hotter, they’ll be 8 degrees hotter. And as you know in Australia, you know, we have temperatures of 47, 48, 49 degrees – I mean – if that becomes 55, 56, 57 degrees Celsius, that is, that is simply unsurvivable for people unless*

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<sup>17</sup> Will Steffen - Climate Change 2020 - Why we are facing an emergency - April 2020, duration 1:02:48, by Renew, 23 Apr 2020, <https://www.youtube.com/watch?v=x94fcoIG9GQ>

<sup>18</sup> David Spratt talks about ‘Climate Reality Check 2020’, duration 40:10, by Climatic Collective, 22 Nov 2020, <https://www.climactic.com.au/show/climate-conversations/david-spratt-talks-about-climate-reality-check-2020/>

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***they are in an icebox. Um... You know, we have, we have figures now telling us that the water shortages in, in Asia, in the next 10 years, in India for example, would become so chronic that there will be mass migration due to, due to inability of people to either feed or water themselves. So, um... Maybe we need to talk less about abstract numbers, and more about real impacts.***

On 28 November 2020, New South Wales recorded its hottest November day ever, at Smithville (about 214 km north of Broken Hill near the NSW-SA border) at 4:35 pm local time, at +46.9 °C.<sup>19</sup>

With global mean temperatures ‘locked-in’ for and passing +1.5 °C warming by around 2030 (or possibly earlier), and heading on the current GHG emissions trajectory for +2.0 °C possibly before 2050,<sup>20</sup> then locations like Smithville, NSW and surrounds could likely see peak temperatures of around the mid-50s °C and potentially become seasonally uninhabitable in less than 30 years.

## Conclusion

The Laws of Physics don’t ‘care’ what anyone’s politics and ideologies are, or the wishes of any political donors that sponsor politicians and their campaigns.

***To limit warming to 1.5°C or well below 2°C, as required by the 2015 Paris Agreement, the world needs to wind down fossil fuel production. Instead, governments continue to plan to produce coal, oil, and gas far in excess of the levels consistent with the Paris Agreement temperature limits.***<sup>21</sup>

**What’s far more important and crucial for climate mitigation is what humanity does (or fails to do) from now on, and before 2030, not longer-term aspirations about 2050. Making action on climate disruption the first priority of governments and business is the key to protecting people, society and nature, for the future.**

***“If we don’t solve the climate crisis, we can forget about the rest.”***

– Professor Hans Joachim Schellnhuber, founder, Potsdam Institute for Climate Impact Research, Germany<sup>22</sup>

**The proposed APC-MOD6 must be denied; otherwise, it contributes to an immediate existential threat to human civilisation and conflicts with Australia’s commitments given in the Paris Climate Agreement to make substantial reductions to our carbon-based emissions.**

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<sup>19</sup> <https://twitter.com/ScottDuncanWX/status/1332687053595750401>

<sup>20</sup> **Analysis: When might the world exceed 1.5C and 2C of global warming?**, by Zeke Hausfather, published by *CarbonBrief*, 4 Dec 2020, <https://www.carbonbrief.org/analysis-when-might-the-world-exceed-1-5c-and-2c-of-global-warming>

<sup>21</sup> **The Production Gap: The discrepancy between countries’ planned fossil fuel production and global production levels consistent with limiting warming to 1.5°C or 2°C**, UN Environment Programme, 2 Dec 2020, page 3, <https://www.unenvironment.org/resources/report/production-gap-2020>

<sup>22</sup> **‘I would like people to panic’ – Top scientist unveils equation showing world in climate emergency**, published in *Horizon*, The EU Research & Innovation Magazine, 24 Sep 2019, <https://horizon-magazine.eu/article/i-would-people-panic-top-scientist-unveils-equation-showing-world-climate-emergency.html>

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