

Statement by The Honourable Malcolm Turnbull AC to the Budget Committee of the United States Senate 10 May 2023

Thank you for inviting me to speak with you today.

I was Prime Minister of Australia from 2015-18, prior to that I had served as Minister for Communications 2013-15 and Minister for Environment and Water Resources in 2007.

I was leader of the Liberal Party of Australia from 2008-09 as Opposition Leader and from 2015-18 as Prime Minister.

In addition to other interests I am presently a director of the International Hydropower Association and Chairman of the Green Hydrogen Organisation and actively engaged in the development of renewable generation and storage projects in Australia. Earlier this morning I have been discussing pumped storage at the Waterpower Week conference of the National Hydropower Association.

Australia is, like the United States, very vulnerable to the impacts of global warming. Climate and water availability in particular has always been variable; global warming is making it much more so.

The terrible “black summer” fires of 2019-20 were unprecedented in their extent - over 24 million hectares - and their damage - in addition to 33 people killed, over 3000 homes destroyed, \$10 billion in property losses, and nearly 3 billion animals either killed or displaced. Many environments and ecosystems, such as rain forests, may never recover.

“One in a hundred year” floods seem to be coming around every few years. Only last year I saw the Premier of NSW stand on a street corner in Lismore, surrounded by flood debris, to tell the media the flood was a one in a hundred year event....I had stood on exactly the same spot five years before and said the same thing.

Australia’s per capita emissions are comparable to those of the United States and as a wealthy, developed society we have both the responsibility and the means to accelerate our decarbonisation.

Australia is, like the United States, endowed with enormous resources of fossil fuels especially coal and natural gas.

Australia is the fifth largest producer, the second largest exporter and has the third largest reserves of coal in the world.¹ Australia is also the seventh largest producer of gas in the world, depending on the year either slightly ahead or behind Qatar as the world’s largest exporter.

¹ <https://www.ga.gov.au/digital-publication/aecr2022/coal>

Coal and Natural Gas are our second and third largest exports behind iron ore collectively representing around A\$184 billion (2021-22) and 31% of our total exports.

While Australia's fossil fuel endowment is abundant, even more so is its endowment of renewable energy. 99% of new energy generation capacity in Australia is solar and wind (globally it is 90%) because it is cheap and this is why renewables in Australia are undercutting coal and gas.²

It is very clear that an orderly transition to renewables and a zero emission energy sector will result in cheaper energy. It has to be planned of course, but in our country the economic argument is over.

There is now considerable momentum behind the decarbonisation agenda. The Labor Party is in office federally and in all of the eight States and Territories apart from Tasmania.

The last time I felt there was this degree of momentum was, ironically, in 2007 when John Howard was Australia's Liberal Prime Minister, I was his Environment and Water Minister and we went to the election promising an Emissions Trading Scheme designed to take early action to put a price on carbon and thus use a market based approach to reducing emissions.

It was policy based on the Shergold Report that suggested our economic outlook would suffer if we did not start moving away from an emissions heavy economy. *"waiting until a truly global response emerges before imposing an emissions cap will place costs on Australia by increasing business uncertainty and delaying or losing investment."*

The Labor Party led by Kevin Rudd (now Australia's Ambassador in Washington) took a near identical policy to the election which they won.

Over the next few years opposition grew to taking action to reduce emissions generally, and imposing a price on carbon particularly.

I lost the leadership of my own Party in 2009 over this issue and was succeeded by Tony Abbott who waged an unrelenting war against climate action in general and carbon pricing in particular.

Under Mr Abbott's leadership the Liberal Party won the 2013 election and the emissions trading scheme introduced by the previous Labor Government was repealed.

The most effective continuing federal policy that survived the change in government was a Renewable Energy Target whose aim was to ensure at least 20% of electricity (33,000 Gwh) was generated by renewables by 2020. The target has been met and it has supported large

² See IRENA "Renewable Capacity Statistics 2023" https://mc-cd8320d4-36a1-40ac-83cc-3389-cdn-endpoint.azureedge.net/-/media/Files/IRENA/Agency/Publication/2023/Mar/IRENA_RE_Capacity_Statistics_2023.pdf?rev=d2949151ee6a4625b65c82881403c2a7

scale renewable development and an uncapped small scale renewables scheme supported rooftop solar where Australia is a world leader with about 1/3 of houses having solar panels.

I replaced Mr Abbott as leader and PM in 2015 and went on to win the 2016 election. During my time I was able to make some important progress to emissions reduction, including starting the largest pumped hydro scheme in the southern hemisphere, but I was unable to overcome the entrenched opposition within my Party to a more concerted and coherent move away from fossil fuels even when the relevant policy had broad support from the public and industry.

From my point of view as PM the biggest obstacle to climate action was always political and from within the right wing of my own Party supported by right wing media.

Nonetheless the economics of renewables together with state government policies have seen the continued growth in the sector so that in 2022 renewables made up 35% of total generation in the National Electricity Market (up 4% on the year before). The new Labor Government's target is to have renewables generating 82% of the NEM by 2030.

In my view at this stage the most significant barrier is simply getting the infrastructure built; in particular transmission and long duration storage like pumped hydro³ which enable a renewable transition. Permitting delays in particular have the potential to hold things up.

And Moore's law does not apply to digging holes.

The pace of renewable deployment is far faster than anything else in the history of energy. In 2022 190 GW of new solar was deployed globally, and solar growth has been running at 20% p.a for decades.

In 2009 1% of electricity generation in Australia was solar and wind, in 2017 it was 9% and today it is 31%. Professor Andrew Blakers of the ANU has estimated that solar capacity will pass combined coal+gas+hydro+nuclear capacity around 2030. He estimates that solar will be the dominant form of generation - about 2/3 to 3/4 of all generation globally. Last year solar and

³ There are literally thousands of locations for pumped storage in Australia and the USA - and it is a familiar technology already widely in use. Unlike traditional hydro it does not require the impoundment of vast bodies of water. "For example, a pair of 100-hectare reservoirs with 20-m average depth, spaced a few km apart, connected with a tunnel, and with an altitude difference of 600 meters, can store 24 Gigawatt-hours (GWh) of energy, meaning the system could supply 1 Gigawatt of power for 24 hours. This is sufficient for the storage needs of 0.5 million people in an affluent mid-latitude region where most of the energy is derived from variable solar PV and wind." From Andrew Blakers 2022 Future Energy in Asia Paper for the Asia Development Bank
<https://www.adb.org/sites/default/files/institutional-document/874256/adotr2023bp-future-energy-asia.pdf>

wind alone were installed three times faster than the combined total of all other forms of energy including nuclear, hydro, coal and gas. ⁴

The clean energy transformation is accelerating and here in the United States the Inflation Reduction Act has supercharged it. Other nations, including my own, have to follow suit.

By this time for much of the political right, global warming had ceased to be a physical reality which had to be addressed, but rather an identity or values issue. I used to regularly observe that a problem that called for economics and engineering was too often the subject of ideology and idiocy.

The climate wars continued until the devastating loss of the Liberal Party in 2022. They dominated my own time as Prime Minister when I was constantly under attack from the right of my own Party which, supported by Rupert Murdoch and his media platforms, drove a leadership challenge in August 2018 that resulted in Scott Morrison becoming Prime Minister.

Mr Morrison won the 2019 election but was defeated in 2022 and the perception that he, and the Party he led, was reluctant to take effective action to address global warming was central to that defeat which should carry very sobering lessons for centre right political parties everywhere.

Australia has a parliamentary system; a House of Representatives with 151 members allocated to the States and Territories on the basis of population and a Senate with equal representation from the States (12 each) as well as 2 senators from each Territory - so 76 in total.

At the 2022 election, a series of independent small liberal candidates ran in what had been safe Liberal seats and won six of them. These candidates, all women, often called “teals” as that was the colour of their supporters T-shirts, ran on a platform which prominently featured stronger action on climate. Together with three similarly minded independents who had won in previous elections, this meant that the Liberal Party had not only lost government but now had in total nine of its hitherto safest districts on the cross bench. In our system independents, once elected, are very hard for a major party to dislodge.

A majority in our House of Representatives is 76, losing 9 of your safest seats⁵ to the cross bench makes a return to government extremely difficult.

⁴ Andrew Blakers “Solar is a runaway global success, and Australia is showing the way forward.”<https://reneweconomy.com.au/solar-is-a-runaway-global-success-and-australia-is-showing-the-way-forward/>

⁵ The electorates are Curtin in WA; Mayo* in S.; Kooyong, Indi*, Goldstein in Victoria; Wentworth, Warringah*, North Sydney and Mackellar in NSW. All of these were won from the Liberal Party in 2022 except for Indi (won in 2013), Mayo (in 2016) and Warringah (in 2019). The current state of the House of Representatives is Government (Labor) 78; Opposition (Liberal 42, National 15) 57, Cross benches 17.

The way in which the teals won underlines the way in which the Australian electoral system brings politics back to the centre. The Liberal Party was perceived by many of its voters as being too “right wing” or out of touch on several issues, notably climate, and the system enabled those voters to find a viable, independent alternative.

Our media environment is similar but different to that of the United States. A common denominator is Rupert Murdoch who is the dominant media proprietor in Australia.

His media outlets have been consistent opponents of action to address global warming and represent by far the loudest voice denying the reality of climate change and resisting measures to decarbonise. It is obvious that a hotter and drier climate is going to result in more fires; an inevitable consequence of climate change. Despite that Mr Murdoch’s media outlets have consistently sought to blame the Black Summer fires on arsonists; at one point prompting the head of the NSW Rural Fire Service to expressly reject this claim.

Increasingly the Liberal Party has found itself situated in a media ecosystem where climate denialism, or at least scepticism, is required to be a member of the political tribe. There are notable exceptions to this of course. The NSW Liberal Government adopted world leading policies to encourage the private sector development of renewable generation and storage, but at the national level especially the heart of the problem has been the way in which the Liberal Party has become out of touch with many of its traditional voters - particularly women and younger voters, and climate policy was at the heart of this alienation.

In short, what had been, twenty years ago, a broadly bipartisan agenda of environmental protection had become a sharp ideological division. Of course there is nothing “conservative” about denying the reality of global warming. Conservatives are prudent and seek to preserve the best of the status quo while organically integrating change - there is nothing more fundamental to conserve than our only planet.

Turning this round is not easy; following the 2022 election defeat the Liberal Party was urged by much of the right wing (mostly Murdoch) media to go further to the right and Mr Morrison was chastised for having, under great pressure, promised in the lead up to the election to aim for net zero by 2050.

Before concluding I should make some observations about China which is now the world’s largest emitter of CO₂e but also the largest and fastest deployer of renewable generation and long duration storage. China produces about 80% of all solar panels (incorporating Australian technology)⁶, about 75% of batteries, and presently dominates the production of the critical minerals required therefor and, to a somewhat lesser extent, wind turbines and electrolyzers.

⁶ The PERC (passivated emitter and rear contact) cells were developed at the University of NSW under the leadership of Professor Martin Green in the 1980s. See “Development of the PERC Solar Cell” by Andrew Blakers IEEE Journal of Photovoltaics Vol 9, No 3, May 2019 <https://ieeexplore.ieee.org/ielx7/5503869/8694165/08653319.pdf?tp=&arnumber=8653319&isnumber=8694165&ref=aHR0cHM6Ly93d3cuZ29vZ2xILmNvbS8=>

It is plainly undesirable for one country to so dominate vital sectors of the global economy. But that is not an excuse to ignore the need to decarbonise, rather it is a reminder that the United States, its allies and friends have to step up to ensure that they are able to manufacture these vital components within their own boundaries.

I have summarised what have been very complex political events over more than a decade; the bottom line however is that turning a question of physics into an issue of ideology or belief has raised the cost and of the energy transition in Australia, contributed to an inadequate global response to global warming, delayed securing the benefits of a clean economy and, now, proved to be electorally, and potentially existentially, catastrophic for the centre right Liberal Party.