



All nations must be much more ambitious at COP26 if we are to stop global heating.

By Bronwyn Kelly

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In November 2021, Scotland will host the 26th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP26) in Glasgow. The central aim is to ensure that the temperature targets of the agreement made between the Parties in [Paris](#) in 2015 [are kept within reach](#). The focus in Glasgow will be on the efforts each country is making to limit global heating to 1.5°C above pre-industrial levels.

It's a make-or-break moment for climate change. Over 190 signatory countries are expected to attend and "[come forward with ambitious 2030 emissions reductions targets](#) (Nationally Determined Contributions or NDCs) that align with reaching net zero by the middle of the century". Implicit in that is an assumption that if greenhouse gas emissions are reduced to net zero by 2050, then it will still be possible to limit global heating to 1.5°C. This assumption is tenuous, especially if governments do not take sufficient action to significantly reduce emissions in the 2020 decade.

Nevertheless, the conference organisers are pushing on with calls for more ambitious NDCs than have been forthcoming from the Parties to date. Their implicit, if not explicit, expectation is that pledges of 50% reductions in emissions by 2030 or much sooner will meet the necessary level of "ambition". COP President-Designate and UK Cabinet Minister, Alok Sharma, has acknowledged that "we cannot wake up in 2029 and decide to slash our emissions by 50% by 2030."

The conference organisers know that much larger and faster NDCs than those currently on offer will be required if they are to "[keep 1.5 degrees within reach](#)". Indeed, Australia's own government knows how important it is to limit global temperature increases to 1.5°C. According to a newly minted [Joint Australia-US Ministerial Statement](#), "The United States and Australia both stress the importance of all G20 countries having communicated ambitious 2030 NDCs by the COP".

Taken at face value, this would be encouraging for the COP26 organisers, especially because it signals that two of the world's most uncooperative Paris Agreement signatories, at least between 2015 and 2020, might be turning around. Whether the most recalcitrant countries will turn around soon enough and fully enough is yet to be determined. At their present pace it is highly unlikely that temperature goals will be met. Physically we can do it. Politically we may not.

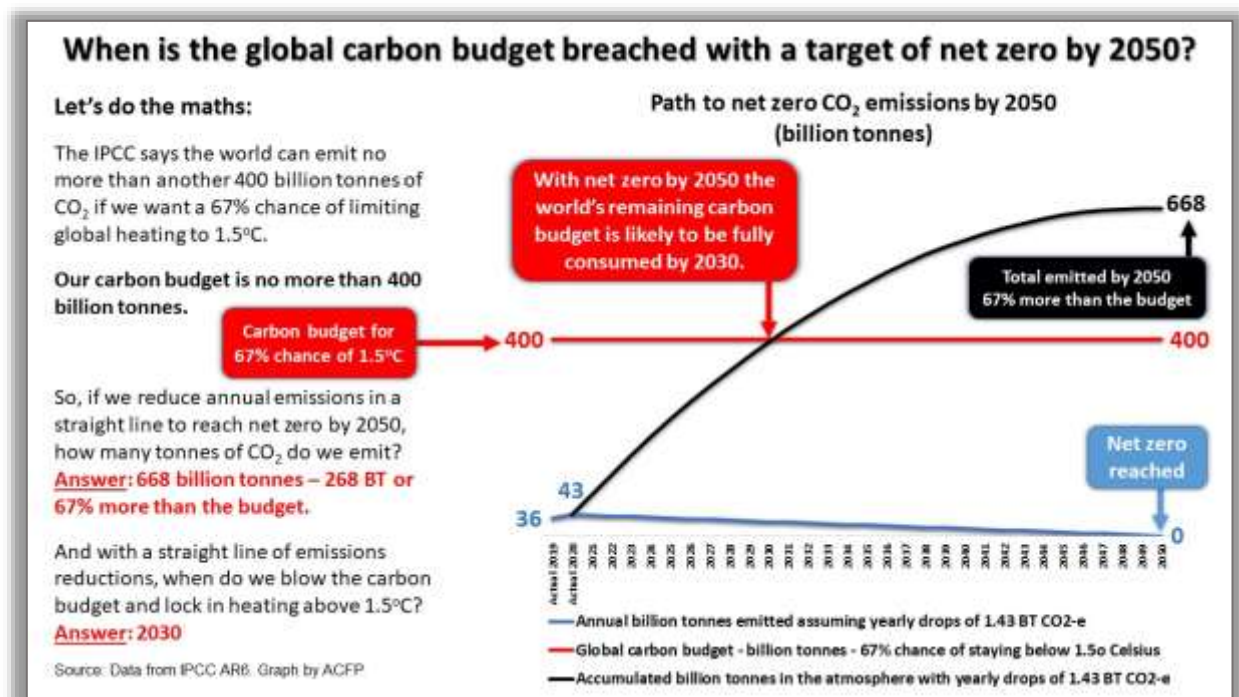
Alok Sharma has said that "To keep the temperature of the planet under control – limiting its increase to 1.5 degrees – the science dictates that by the second half of the century, we should be producing less carbon than we take out of the atmosphere. This is what reaching 'net zero' means."

But that is not what the science dictates. Science dictates nothing about a date by which we should reach net zero, except that we should reach it the day before we emit so much in tonnes of greenhouse gases to the atmosphere that we lose all control over heating and start an unstoppable

chain of incendiary climate feedback loops. There is a limit to the amount we can emit, a carbon budget we cannot exceed – ever – if we expect to limit the heating.

So the vitally important thing to agree on at COP26 is not the percentage emissions reductions each nation will offer by 2030 or 2050. The vital thing to agree on is the remaining total tonnage that is safe to emit and how to fairly share that carbon budget. It's amounts of greenhouse gases that matter, not dates.

If we continue to focus on net zero by 2050 rather than working to set ourselves a safe budget of emissions, we will set the world on track to heating of well over 1.5°C before we know it, probably by 2030. The maths don't work if we stick with the current negotiating framework requiring percentage reductions of emissions to reach net zero by 2050.



The fact is that reaching net zero by 2050 is extremely unlikely to align with keeping temperature increases to 1.5°C. Nor do straight line reductions to 50% by 2030 align with meeting the heating targets.

This calls for an immediate change in the system being used under the Paris Agreement to negotiate NDCs. Instead of expressing those NDCs as percentage reductions of annual emissions, the negotiations should be henceforth based: first, on agreeing on a global limit to the total tonnage of CO₂-e (greenhouse gas equivalents); and second, on an agreement about how to fairly share that remaining carbon budget.

Scientists already know what tonnage budgets are necessary to limit heating, although they use a variety of methodologies for calculating the remaining budgets, each of which sheds light on the likelihood of capping temperatures given different assumptions. The [Intergovernmental Panel on Climate Change in its latest report \(AR6\)](#) has published an estimate of 400 billion tonnes of CO₂ from the beginning of 2020 as the remaining budget for a 67% chance of limiting heating to 1.5°C. But if emissions of non-CO₂ gases such as methane are reduced more slowly than CO₂ emissions and if

Earth system feedbacks such as melting permafrost add more CO₂ to the atmosphere, the remaining budget for a 67% chance of limiting heating to 1.5°C [could be as small as 110 billion tonnes](#).

At the current rate of CO₂-e being emitted annually – around 43 billion tonnes – the 400 billion tonne budget would be consumed before 2030 and the 110 billion tonne budget would be consumed in less than three years. Both these estimates should sober the COP26 attendees. The tighter budget seems unattainable. But there is no point in giving up.

What the science indicates (rather than dictates) is that if we are to have a reasonable chance of limiting heating to 1.5°C, then the most reasonable global emissions budget is probably in the order of 200 to 250 billion tonnes. This strikes a balance between what is physically achievable in tonnage reductions, politically negotiable in policy terms, and reasonably safe in temperature terms. While we might exceed the 1.5°C limit, it is by no means too late to aim for something very close to it and work in full cooperation to share that remaining budget fairly.

A new negotiating framework in the Paris Agreement would give us the best chance of doing this. [A model for that framework has been suggested by Australian Community Futures Planning](#) and Australia is entirely capable of leading the introduction of this new basis for negotiations at COP26. We have so much to gain if we shift to this cooperative framework. Australians can encourage leaders to do so by signing [the petition to the Prime Minister](#) demanding that Australia lead the world at COP26 to stop global heating.



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