

Question 1

1. On 24 January 2022, the Commission (as well as several other parties) was forwarded an email chain, subject line *“Why the climate fraud Jacinda and James take credit for is too obvious for words...”*. The emails include a reference to Happer and Wijngaarden:

“The work of the eminent physicists, Professors Happer (USA) and Wijngarden (Canada) has since absolutely proven from satellite telemetry that the UN IPCC had grossly overstated the role of atmospheric CO₂ so that a doubling from today (i.e. from say 420ppm to 840ppm) would have almost no effect on the climate. Other European, British and Russian scientists have also published on this and their evidence is unassailable – even if it is not YET published by a global media bent on supporting the UN IPCC fraud.”

2. On 8 February 2022, the Commission hosted an online question-and-answer session as part of consultation with He Waka E Noa. A record of the chat log for this event includes the following reference to William Happer:

“12:42 PM

The latest science GWP isn't credible, I have had an assessment of Myles Allen et al (including David Frame) intial paper*

12:44 PM

I had a quick look at the paper, and I don't think it means much. It takes radiative forcings and atmospheric life time, neither of which the authors understand very well and invents yet another parameter GWP, which means almost nothing. The paper is tedious, pompous, and devoid of any crisp scientific understanding. Its conclusions are based on models that have already been proven to exaggerate warming per W\m² of radiative forcing by at least a factor of two or three, and probably more. The economic models do not take into account the enormous benefits of more CO₂ to agriculture, and they do not clearly state that the forcing from doubling CH₄ or N₂O (which is unlikely to happen no matter what) causes quite a bit less forcing than doubling CO₂, which I hope does happen for the sake of a more verdant Earth.*

Will This from Will Happer, emeritus Professor in Physics from princeton in the USA? shouldn't we get the science correct first.”

Question 2

3. On 20 June 2023, the Commission received a submission on its draft advice for the second Emissions Reduction Plan from DairyNZ. The submission makes the following references to the metrics that are used to measure methane.

“The dairy sector is committed to playing its fair share in contributing to these targets. However, we do not agree that long-lived and short-lived gases should be bundled together using the GWP100 metric. New Zealand has already legislated split gas targets. It follows that emissions budgets should also separate long-lived gases from short-lived gases. The Commission has missed critical scientific evidence

in this regard, and we urge consideration of the findings of the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report on this topic³.

We support a delineation in the sector sub-target for agriculture (and correspondingly for waste) for the second and subsequent emissions budgets between methane and long-lived gases. This will enable clearer tracking towards the 2030 methane target.”

“DairyNZ broadly agrees with the Commission’s draft advice on agriculture, although, as noted elsewhere in this submission and in previous submissions to both the Commission and the Government, we do not support the use of GWP100 in relation to the biogenic methane targets. We seek emissions budgets that separate long-lived gases from short-lived gases so that the warming impact of each can be more appropriately accounted for. We urge the Commission to respond to the growing body of evidence in support of GWP in its final advice to the Government on the second Emissions Reduction Plan and in its separate mandated review of the 2050 targets.”*

4. On 17 July 2023, Dr Andy Reisinger emailed the Commission as an FYI following an email exchange with Simon Upton. The relevant document was included in that exchange as an attachment due to length, and primarily discusses emissions offsetting. The following extracts are in scope.

“There is a more near-term consequence of using GWP for offsetting; that consequence does not make it wrong, but it warrants a critical analysis. Figure 1 in Dave’s paper (which is physically correct) shows that a farmer who wants to increase CH₄ emissions and offset their warming using GWP* would need to furnish much more near-term removals and hence face higher costs than if the same farmer used GWP100 to offset annual emissions for the next 100 years. That’s because GWP100 underestimates the warming from sustained emissions for the first 100 years, and then overestimates the warming beyond 100 years.*

Dave noted this in his verbal presentation and suggested that one could perhaps spread out that high up-front cost over time – but this would then no longer result in an equal but opposite temperature effect at all times. And the longer the period over which those initial high costs are spread out, the more similar the policy would effectively become to using GWP100...

“Comparing short- and long-lived gases always, invariably, forces us to make some judgements about how we value the near-term and the long term, and different metrics simply introduce these issues in different ways.

“In my view it is worth noting that the IPCC assessment by Working Group III found that GWP100 does resemble the global damages potential for CH₄ for social discount rates of around 3% (and it is hard to argue in my view that emissions should not be weighted according to the climate damages they are estimated to cause), but also that the dynamic GTP is closely related to a cost-effectiveness potential (and it’s hard to argue that we should not make abatement decisions based on cost-effectiveness). It’s also worth noting that relative to a temperature goal of somewhere below 2 degrees, both those metrics land somewhere between about 20 and 40, tonne for tonne, for CH₄ vs CO₂ emissions. Which also happens to be the exchange we would end up with if we used GWP, but then allowed farmers to spread out the costs over 100 years to avoid the sharp shock in the near term that GWP* produces from a step-change in CH₄ emissions.*

All this is not to argue against the use of GWP for offsetting – it's very clear that GWP* does give a better continuous representation of temperature change over time arising from time series of CH4 emissions than GWP100 – but is that the dominant policy objective we want to achieve?"*

"Whether GWP is suitable depends again on the objectives we want to achieve with offsetting. I noted above that using GWP* results in bringing forward the trade-off between CH4 and CO2 emissions, given that GWP100 underestimates the actual warming from a time series of CH4 emissions over the first 100 years."*