



May 14, 2021

Consultation on the Climate Action Plan 2021 – ICSF Submission

Dear Minister Ryan,

An Introduction to ICSF

The Irish Climate Science Forum (ICSF, www.ICSF.ie) was founded in 2016 and its members include Irish scientists, engineers and other professions. We are committed to identifying and disseminating the latest climate science to all with an open and enquiring mind, driven by the imperative of objectivity without vested interests. We seek a sustainable future for Ireland and its people, consistent with safeguarding our economy. We aim to better inform national energy and climate-related policymaking in the best long-term national interest. We are self-funded, and do not accept corporate or sector funding. ICSF is now linked to the international CLINTEL think-tank on climate realism, see www.CLINTEL.org.

Our Submission on the Climate Action Plan 2021

We are very pleased to note that this consultation highlights that *“all voices will be heard in a fair and equal manner”*. That is welcomed, in that the political debate ever since the Citizens’ Assembly in 2017 right through the various Oireachtas Committees has heard only the “doomsday” side of climate science; it is now time, we suggest, for balanced dialogue.

We therefore value this opportunity to be heard.

We make our submission by posing three fundamental questions:

- Q1. On what scientific basis was a climate emergency declared?
- Q2. Have the real implications of the proposed 2030 mitigation target been considered?
- Q3. Can Ireland actually afford the proposed 2030 mitigation ambition?

As you will see below, we believe that none of the questions have been sufficiently addressed. Therefore we believe that the electorate – and particularly our youth - should be adequately informed before adopting any climate action plan.

Q1. On what scientific basis was a climate emergency declared?

It is perhaps best to start with a few reality checks on climate science.

Forty years of climate research, costing billions of dollars, has failed to reduce the uncertainty in climate sensitivity estimates (that is the global temperature increase expected for a doubling of CO₂ in the atmosphere). In the real world, global satellite and surface air temperature measurements over the last 40 years reveal an average actual rate of temperature increase of ~0.15°C per decade, which if continued, points to a further temperature rise of only ~1.2°C by 2100.

These observations also demonstrate that the artificially-tuned IPCC models are on average 2 to 3 times over-sensitive to CO₂ increases (see, for example, videos of our recent lectures on <https://www.icsf.ie/lecture-series>). In particular, it is now also abundantly clear that the temperature rises of ~4-5°C by 2100 derived from the extreme RCP8.5 scenario in IPCC AR5 (or the corresponding similar versions in the draft AR6) have no basis in reality.



Based on a 100-year record of representative tide gauges globally, empirical evidence shows global mean sea level (GMSL) to be rising linearly at 2.1mm/year over the last 100 years, the earlier parts of which period clearly had minimal GHG influence. Satellite measurements show a steady rate of increase of 3.2mm/year over the last 30 years. Neither demonstrates significant acceleration within the natural variability, and also confirms no significant adverse trends in the cryosphere. Even the higher satellite rate would imply an empirically-based GMSL rise of only 25cm rise by 2100, which is far less than the oft-quoted figures of over 1m of the extremely-unlikely IPCC RCP8.5 and SROCC scenarios.

The media keep driving the misperception that “extreme weather events” indicate dangerous anthropogenic climate change. However, rigorous analysis of the decadal and even centennial global trends in precipitation, floods, droughts, heatwaves, snow cover, hurricanes, tornadoes, wildfires, sea level, its “acidity” and coral bleaching generally indicate that these trends demonstrate natural variability, are not unprecedented, nor are worsening.

The recent GWPF Report “*Extreme Weather in 2020*” by Ralph Alexander on recent weather trends (ref <https://www.thegwgf.org/content/uploads/2021/04/Extreme-Weather-2020.pdf>), provides much detail, as also does our “*Overview of the Latest Climate science for Policymakers*” (ref www.ICSF.ie). In a broader perspective, HH Lamb’s classic book “*Climate, History and the Modern World*” demonstrates how relatively benign the climate is in the later Holocene Epoch. In particular, current and historical data on the Irish climate indicates that, if anything, it is becoming more benign. The IPCC SREX Report of 2012 and its AR5 Report of 2014 did not find evidence of links between “extreme” weather events and climate change, conclusions which we also believe to be emerging from the draft AR6 Report.

Objective science and all the above observations do not point to a climate emergency.

As a reality-check on mitigation, the COVID-19 pandemic reduced global GHG emissions by about 7% in 2020, which reduction had no perceptible influence on global CO₂ concentration (as per Mauna Loa data), and by implication, had no influence on climate; this is consistent with the fact that anthropogenic CO₂ is only a very small part of the natural CO₂ cycle. Hence the proposed 50% reduction in Irish GHG emissions by 2030, if ever achieved, would have an imperceptible impact on climate (a general point which we also understand is being made in the IPCC draft AR6 Report).

A corollary is that there are no costs for mitigation “inaction”. On the positive side, slightly increasing CO₂ levels enhance photosynthesis and are measurably greening the planet (ref www.CO2science.org), and is also helping increase global food production.

While mitigation is for now (unfortunately) mandated by international protocols, national mitigation action should therefore, we suggest, focus primarily on the socio-economic benefits. Prudent adaptation to whatever modest climate change occurs in the decades ahead would indeed make more sense.

Q2. Have the real implications of the proposed 2030 mitigation target been considered?

We see little account being taken of the real technical implications of the proposed policies.

On electricity supply, if operating on 70% average renewable generation (implying towards 100% at times) in what is effectively an Irish island grid could pose significant risks of blackouts (like those experienced in Texas, California, UK and South Australia).

Gas-fired open and closed-cycle turbines will be needed to maintain grid stability at all times as well as providing continuity in times of low or no wind or solar. Electricity interconnectors are no panacea as these can be subject to technical reliability issues as well as politically-driven interruptions. Indigenous gas supply is rapidly depleting and the UK gas interconnectors will be a less reliable source as North Sea fields deplete. In that context, it is inexplicable to contemplate banning the construction of an Irish LNG import facility.

Increased electrification of transport and building heating could approximately double the total load on the electricity network; it seems not yet appreciated that to accommodate this higher loading and proposed higher levels of renewable power, the transmission and distribution grids would need major costly and disruptive (over-ground and underground) reinforcement and upgrading.

These technical challenges are well analyzed in three recent IAE Reports
“*The Future of Electricity Transmission in Ireland*”, Briefing Paper, October 2020, see:
<http://iae.ie/wp-content/uploads/2020/10/The-Future-of-Electricity-Transmission-in-Ireland.pdf>.
“*National Energy and Climate Plan – the Challenges of High Levels of Renewables in the Irish Electricity System*”, March 2021, see:
http://iae.ie/wp-content/uploads/2021/03/IAE_Challenge_HighLevelsofRenewables-1.pdf.
“*Natural Gas, Essential for Ireland’s Future Energy Security*”, July 2018, see:
http://iae.ie/wp-content/uploads/2018/08/IAE_Natural_Gas_Energy_Security.pdf.

Incidentally, the electrification of transport and heating will reduce national fuel diversity and introduce new supply disruption risks, which have yet to be evaluated; have the fuel diversity lessons of the 1970s been forgotten?

In the transport sector, Electric Vehicles (EVs) can improve urban air quality, but battery production contains embedded carbon equivalent to 50,000km to 100,000km of fuel use in an ICE conventional vehicle. EVs are by no means “carbon free” even if charged from renewables. There are also serious questions of cobalt/lithium supply chain availability and sourcing ethics, as also in post-use EV battery recycling. It would seem more sensible to allow continued customer choice as vehicle drive train ICE/hybrid/EV technologies evolve.

The deep retrofitting of dwellings and installation of heat pumps are laudable, but have a long payback time and may be therefore unaffordable to most. Many older buildings are so poorly insulated that incentivised partial retrofitting or new-build may be better solutions. Actions in improving insulation do have significant comfort and health benefits, so a determined roll-out is highly desirable. Natural gas will continue to be an optimal heating fuel (also as a necessary winter-time supplement to heat pumps); proposals to convert to hydrogen fuel at a domestic level do not make sense.

Larger and mid-sized industries have generally invested in increasing energy efficiency to maintain international competitiveness in recent years; smaller enterprises will require increased incentives to achieve optimal energy performance.

Agriculture is laudably committed to being more efficient in every aspect, and is inherently more sustainable in Ireland’s temperate climate. There is emerging evidence that the GHG/GWP metric currently used to calculate equivalence between CH₄ (methane) and CO₂ is significantly over-rated. In addition, pioneering research by Happer and Van Wijngaarden shows that CH₄ is nearly irrelevant to global warming (ref: <http://co2coalition.org/?s=methane+and+climate>).

Carbon capture technology is extremely expensive and unproven with associated geological risks.

Overall, we believe that these practical technical issues, and the very significant associated costs, have not yet been adequately addressed in the proposed climate action policy.

Q3. Can Ireland actually afford the proposed 2030 mitigation ambition?

As far as ICSF is aware, there have been no Government estimates on the costs of the 2030 climate ambitions. We wonder how climate legislation can be constitutionally implemented without adequate cost/benefit analysis.



The 2017 cost estimates by the Irish Academy of Engineering (IAE), in its Report *“Ireland’s 2030 GHG Emissions Target - an Assessment of Feasibility and Costs”* partially-costed the then-proposed 30% reduction in emissions at ~€35 billion, ref: http://iae.ie/wp-content/uploads/2017/07/IAE_Report_-_Irelands_2030_Greenhouse_Gas_Emissions.pdf.

In 2020, the MaREI/EAI *“Our Zero E-Mission Future”* Report estimated the proposed 2030 energy transition costs at €63 billion, ref: <https://eaireland.com/wp-content/uploads/2020/11/Our-Zero-e-Mission-Future-Report.pdf>, though this too excluded other aspects of meeting the proposed 50% GHG reduction target.

ICSF estimates the cost of achieving the 50% reduction goal, assuming it could be achieved, as likely exceeding €100 billion (including the necessary grants and subsidies), equating to a cost of ~€20,000 per person, or ~€50,000 per household between now and 2030. This would be in addition to major increases in consumer utility costs, as yet unquantified, but already emerging.

Achieving the proposed 50% GHG emissions reduction by 2030 would, it seems, almost inevitably require reduction in agricultural activity, closure of some industries, energy rationing, curtailment of lifestyle, societal disruption and job losses. There is no scientific basis to have to impose de-growth.

The Climate Action Plan 2019 (now outdated) included in its Figure 4.2 a marginal abatement cost curve for the then 2030 ambitions. While it shows theoretically-negative abatement costs for many initiatives, these refer to the economic benefits, many over a long timescale. This data does not show the real cash costs to Irish taxpayers and consumers between now and 2030.

We conclude that the Government is not telling the electorate what climate action to 2030 is really going to cost them.

The “Net-Zero 2050” ambition costs are as yet simply unquantifiable, and are certainly unaffordable.

Conclusion

We respectfully suggest that the answers to our three questions above are “no”. Therefore we believe that reality checks in all three areas are needed before setting national climate policy.

We in ICSF wish for a sustainable future, but climate policy should not be a knee-jerk reaction to an imagined climate emergency. Instead, it should be based on prudent energy conservation with optimal adaptation to whatever climate trends emerge in the coming decades, with due allocation of scarce national post-pandemic resources to pressing needs in healthcare, wellbeing, housing, infrastructure upgrades, youth employment and poverty alleviation.

We look forward to being heard.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Jim O'Brien', written in a cursive style.

Jim O'Brien, Chair ICSF.