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Mr Brian Carroll
Department of Communications, Climate Action and Environment
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8th March 2018

Dear Brian,

RE: Scenarios for Decarbonisation

Thank you for meeting with us recently.

As discussed, I attach a note setting out a set of scenarios that the Climate Change Advisory Council believe would be important in underpinning our work of advising Government on the National Mitigation Plan and policy relating to the reduction in greenhouse gas emissions.

As outlined at the meeting, and recognising the broad range of scenarios that could be progressed, the Council need a process that will:

1. Co-ordinate the work suggested by the Council with that of TRAM to ensure that there is no unnecessary duplication.
2. Ensure that the Climate Change Advisory Council (through the Secretariat), in consultation with TRAM, prioritises a small number of key scenarios to be analysed that will support the role and function of the Council.
3. Ensure that the Secretariat is engaged in the development of the scenarios and the modelling work so that they can participate in the adjustment of the scenarios in light of early findings and so that the Council will better understand how the conclusions are derived from the evidence.

The Council's deliberations would benefit from an understanding of work being undertaken by TRAM on scenarios. Similarly, we are happy to share our research with TRAM. It would, therefore, be very helpful later this year if you could present to the Council on the current and future work programme of TRAM and opportunities as you see it, for interaction with the Council, recognising the separate and distinct roles of both bodies.

As I am sure you will appreciate the Council is very eager to get work under way and as a result, we would appreciate your response on how our research needs will be met, whilst not duplicating the work of other bodies, such as the TRAM.

As I indicated at the meeting, we are also happy to share the insights we gain from our ongoing work on the implications of introducing a carbon price floor, should the Department so wish. We believe that sharing the insights from analysis in no way restricts our independence (or that of the Department). Based on the same evidence we might well reach different conclusions from the Department on the implications for policy, based on a range of different considerations.

Once again, thank you for taking the time to meet with us.

Kind regards,

Prof. John FitzGerald

Chair

Climate Change Advisory Council.

Climate Change Advisory Council

Scenarios for Decarbonisation

Introduction

The Climate Change Advisory Council is mandated to advise and make recommendations to the Minister and the Government in relation to mitigation, adaptation and the transition to a low carbon climate resilient and environmentally sustainable economy and society by 2050. Scenario analysis is a key part of the evidence base that underpins such advice and recommendations. It should be stated at the outset that this note presents a selection of scenarios for decarbonisation that the Council consider complimentary to, and useful in, augmenting the scenarios that are being developed by the Department. The Council think it would be useful to engage with the Department as part of the process of developing scenarios. The Council appreciates the invitation from the Department to feed into the TRAM work program that is currently being developed.

The Department and the Council share a mutual interest in developing a robust suite of scenarios and avoiding duplication of effort, especially considering the existing capacity and current modelling activities. It would be beneficial to the Council to 1) understand how scenario development is being approached, 2) understand the detail of the assumptions that make up the scenarios and 3) share in the analysis of the modelling results. It may be that many of the scenarios that the Council suggests are already in development by the Department.

Priority Scenarios

1. *High Economic Growth*

Current models are underestimating the level of economic growth and therefore the level of emissions associate with economic growth. A scenario considering the risk of substantially higher growth to 2030 is essential.

For example, the economy is currently growing at between 5% and 6% a year. If this rate of growth continues to 2020 and subsequently grows at 3.5% or 4% a year to 2030, it would

involve substantial immigration and require significant further infrastructure affecting the building sector.

A low growth scenario might also be relevant if it puts major pressure on the ability to fund necessary investment in retrofits, etc. However, this is much less urgent than the high growth scenario.

2. *Electrification of Transport and Heating*

Low carbon technology for both transport and heat is maturing and costs are dropping rapidly. The scenario would need to investigate the cost to households of upgrading to electricity heating systems. Exploring the balance of the renewables required to keep the carbon intensity of electricity generation low needs to be explored for a range of uptake for EVs and electrification of heating. There is also the question of emissions that are not currently in the ETS moving to the ETS (transport and heating) through electrification. How will this be affected by the changing costs of technology? What price of carbon will be necessary to drive a particular scenario and how will it be implemented? What other policies will be necessary to ensure the scenario happens? What will be the costs for society generally and what will be the impact on the public finances? What would be the cost per tonne of carbon reduced?

3. *Do Better than 2030 Objectives*

The rate of emissions reduction is important. In view of the longterm transition objective, should we be more ambitious on our 2030 objectives? What are the implications of this? What is the cost of more rapid mitigation? Essentially should Ireland adopt a tougher set of targets for 2030? What would be the costs and benefits? What policies would be required to implement such a scenario? Would it reduce significantly the costs of reaching the target for 2050? What would be the cost per tonne of carbon reduced?

What are the savings from 1) increased private and public health from reduced pollution and warmer buildings, 2) increased security of supply, 3) reduction / avoidance of purchasing compliance, 4) enterprise and employment benefits, 5) tax flow considerations and 6) investing in clean and sustainable transport?

4. *Cost of Not Meeting Targets to 2030*

What is the true cost of non-compliance with 2020 and 2030 targets? This will need to be considered in the context of 2050 mitigation objectives.

5. *Carbon Price Floor*

Consider the economic implications of a carbon price floor as has been introduced by other ETS members.

Compare the effects of a carbon price floor with a regulatory decision to close coal (and peat).

Specifically how would it affect Ireland? What would be the implications for the public finances? There would be savings on support for renewables and the state would receive any revenue from the price floor. What would be the cost per tonne of carbon reduced?

The wider macro-economic effects of the changes would require a separate study, as would be the effects on the EU ETS price.

6. *National Development Plan 2018-2027 and National Planning Framework*

Analyse the impact of the new National Development Plan and the contribution it will make to meeting Ireland's goals on tackling climate change.

Conclusions

In the case of each case scenario the first task will be to establish the impact on greenhouse gas emissions. In each case, it will be important to know the expenditure and revenue implications for the state, the broad implications for the economy, the distributional effects across broad groups, such as consumers and producers, whether there are any key sectors or groups that may be particularly affected or whose response will be crucial for the scenario. Finally, the policy framework that is assumed in the scenario or likely to be needed under the scenario should be spelled out.