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29 January 2019

Dear Robert,

**RE: Climate Change Advisory Council response to proposed changes to the Public Spending Code**

The Climate Change Advisory Council welcomes the publication of the reviews of the 'Central Technical Appraisal Parameters' and on 'Valuing Greenhouse Gas Emissions' in the Irish government's Public Spending Code. The papers, and the underlying research by the Irish Government Economic Evaluation Service, provide a very good basis for the finalisation of the Spending Code.

The Council has some recommendations on how the final version of the Code could be improved to take account of the challenges posed for Ireland in tackling the problem of climate change.

The Council notes that the review has recommended that the social discount rate should be reduced from 5% to 4%, and the implementation of a new approach of declining discounting into the future. The Council welcomes the proposed introduction of declining discounting and further commends the proposal that the discount rate is kept under review. There has been a clear trend towards lower discount rates throughout developed countries, as noted in the [OECD \(2018\)](#) survey. This survey also notes the emergence of 'dual discounting' which involves applying different discount rates for financial and natural capital to improve appraisal practices.

Ireland's objective of transitioning to a low-carbon, climate-resilient and sustainable economy and society by 2050 should guide the approach of the Public Spending Code. This implies that the damage done to society in 2050 by a tonne of carbon dioxide emitted by sectors covered by the ETS will be the same as that for emissions from the rest of the economy. As a result, we should use a single price of carbon in valuing long-lived projects, irrespective of differing prices today in the ETS and the non-ETS sector.

The Council has repeatedly suggested that the current ETS price and the carbon tax are too low, given Ireland's objective for decarbonisation by 2050. Hence the Council has recommended that Ireland join with other countries in introducing a carbon price floor. The Council has also recommended a steady increase in the carbon tax to bring it closer to a price that reflects the long-term damage done to society from carbon emissions.

In the Draft Code, the present value of future costs and benefits of projects will be determined by the discount rate proposed by the Department. Accepting that discount rate, and taking the Department's proposed cost of carbon dioxide emissions in 2050 of €265 a tonne, this is not consistent with the value for carbon proposed by the Department for 2020. Using the Department's proposed discount rate, and the proposed 2050 value for the cost of carbon dioxide, this would suggest that the appropriate price to use for 2020 is around €80 a tonne.

Target consistent studies in developed countries routinely give higher values, with the UK at £68 per tonne in 2020 (tonne CO<sub>2e</sub> in 2017 £ values) ([BEIS, 2018](#)), as have global studies detailed by the [High-Level Commission on Carbon Prices \(2017\)](#)<sup>1</sup>. The other key empirical approach, as damage costs often termed the 'social cost of carbon', also supports higher values.<sup>2</sup>

In terms of the costs used in appraisal by governments in practice, both the average cost surveyed across the OECD countries at \$49<sup>3</sup> per tonne in 2020 (in 2017 dollar values) ([OECD, 2018](#)) and those specifically applied to Ireland by the [European Commission](#) at €41 per tonne in 2020 (2017 euro values), also support the view that the proposed cost is low.

Noting the example of the investment in 100 hybrid buses detailed in Budget 2019, if the full welfare costs of this public spending were internalised in the appraisal of this spending decision, it is possible that a cost-benefit analysis could point to a different outcome - leading perhaps to the purchase of a zero-carbon fleet. To ensure the full welfare cost is evaluated requires consideration of the shadow price of carbon, the timespan of the analysis and the discount rate applied overall.

The Council believes that it is important that the complete lifetime costs of emissions, the benefits of the avoided emissions and of 'co-benefits', are fully capitalised throughout the technical lifespan of long-lived infrastructure. The Department's review of parameters noted the importance of the [OXERA \(2002\)](#) report, which was a report that specifically addressed long-term impacts on welfare. To be consistent with the logic of this long-term focus in appraisals, impacts on welfare for many long-lived infrastructural projects are commonly

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<sup>1</sup> Global target-consistent studies also give higher initial values at £150 - £250/tCO<sub>2</sub> in 2025, as a range of results to include 16 different countries representing 74% of 2010 global emissions in the [Deep Decarbonization Pathways Project \(2017\)](#).

<sup>2</sup> A prominent damage cost in the literature is the US regulatory price ([Interagency Working Group on the Social Cost of Carbon, 2013](#)), estimated at \$51 per metric ton of CO<sub>2</sub> in 2020 (in 2017\$ money values). It must be noted, that it has been widely acknowledged that this value is conservative and too low according to both the Intergovernmental Panel on Climate Change ([Pachauri and Reisinger, 2007](#)) and the Interagency report itself.

<sup>3</sup> This is skewed downwards by Ireland's lower price.

included in government appraisals on timescales up to 100+ years.<sup>4,5</sup> A shorter timeframe for financial or economic appraisal of a road investment, such as a period of 30 years, requires a longer timespan to include the ‘residual impact’. This residual impact must include the cost or benefit of emissions to welfare throughout its operational lifetime. Such longer timeframes are consistent with practices now common across [OECD countries](#), and with the provisions of the Climate Action and Low Carbon Development Act (2015) and the National Adaptation Framework ([DCCAE, 2018](#)).

In accordance with this longer-term time frame that has emerged in appraisal practices, it is also important to consider not only emissions and mitigation. The Council believes that it also necessary to consider climate change impacts and adaptation as part of the amendments to the Code, including for cost-benefit calculations that might take account of potentially increasing risk and damages over time. European Commission guidance on Cost-Benefit Analysis of EU co-financing ([Sartori et al., 2014](#)) requires that climate change mitigation and adaptation needs, as well as of disaster resilience, are demonstrably taken into account. It is important that public spending has due regard to adaptation using an appropriate range of global warming scenarios, including those of potential higher warming, in addition to cost-effective risk management.

Should you wish to clarify any of the points above, please contact myself directly or through the Climate Change Advisory Council’s Secretariat via Harriet Walsh at [h.walsh2@epa.ie](mailto:h.walsh2@epa.ie) or phone 01 206 6999.

Yours sincerely,

**Prof. John FitzGerald**

Chair

Climate Change Advisory Council

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<sup>4</sup> The example of France is pertinent where the economic impacts are appraised to 2070 but the residual environmental and social impacts on welfare are analysed up to 2140.

<sup>5</sup> The IGEEES review notes two points to support applying shorter timeframes of analysis; i) that discounting renders long-term costs and benefits negligible, and ii) uncertainty in forecasts makes longer term analysis less desirable. However, as declining discounting will now be applied, this means that long-term costs and benefits will not be rendered negligible as per [Pearce et al., \(2006\)](#). In addition, forecast uncertainty is dealt with in practice through a range of techniques that allow the required long-term timeframe to be applied. Examples include scenarios and sensitivity analysis in French ([Ministère de l’écologie, 2014](#)) and Dutch national guidance ([CPB/ PBL, 2013](#)).