

Open Letter to:

The Prime Minister and Secretary of State at the Department of Energy & Climate Change

22nd October 2014

RE: The EU 2030 decarbonisation target and the framework for climate and energy policies

Dear Prime Minister and Secretary of State,

I wish to state my grave concern about the proposed '2030 framework for climate and energy policies' that is to be finalised at this week's European Council meeting of heads of state and senior ministers. If the 40% target proposed in the earlier Green Paper [1] is adopted, the EU will be signalling its dismissal of the IPCC's carbon budgets associated with a 2°C rise in global temperature. It will give priority to political expediency at the expense of scientific integrity, irrevocably damaging the climate change negotiations in Paris 2015.

My chief concern with the framework relates to the Commission's assertion that "*emissions would need to be reduced by 40% in the EU to be ... consistent with the internationally agreed target to limit atmospheric warming to below 2°C*"[1]. Whilst such a position may have political traction, it is in direct breach of the EU's repeated commitment to reduce its emissions "*consistent with science and on the basis of equity*"[2].

The IPCC's budgets for a "*likely*"[3] chance of not exceeding 2°C, accompanied by weak allowances for equity, demand the EU deliver, at least, an **80% reduction** in emissions from its energy system by 2030, with full decarbonisation shortly after.

This stark contrast with the Green Paper's proposed **40% reduction** arises from two principal issues.

1) The IPCC's "*likely*" carbon budgets

The IPCC's budgets, for a "*likely*" chance of not exceeding the 2°C target, range from around 600 to 1200 billion tonnes of carbon dioxide (GtCO₂) for the period 2011-2100 [4]. To put this in context, in the four years since 2011 almost 150 billion tonnes have already been emitted; i.e. between a quarter and an eighth of the total carbon budget for the rest of the century. To estimate the budget for energy-only carbon, it is necessary to subtract emissions from deforestation and cement production [5]. Even with stringent control on emissions from these sectors, the remaining carbon budget for energy equates to as few as 5 and at the most 20 years of emissions equivalent to those in 2014 [6].

2) The inclusion of equity when apportioning emissions to regions

The EU has acknowledged the need for its emissions to reach a peak and subsequently begin reducing well before those of industrialising and poorer nations. Even today, the carbon intensity of a typical Chinese person's lifestyle is considerably lower than that of their European counterpart (5.9 tonnes p.a. per person compared with 9.4 for the EU28, rising to 10.1 and 11.4 tonnes for the UK and Germany respectively [7]). Under even the most stringent deal at the Paris 2015 negotiations, it is doubtful that the industrialising and poorer nations will collectively reach a peak in their emissions before 2025. However, if this were to be achieved, and if by the 2030s they deliver mitigation rates similar to those of the wealthier nations, the "*likely*" carbon budget remaining for the EU, USA etc. demands immediate double-digit mitigation rates [8].

Put simply, the basic arithmetic of: (1) the IPCC's 2°C carbon budgets; (2) highly optimistic assumptions on deforestation and cement; (3) stringent emissions pathways for industrialising and poorer nations; and (4) the EU's oft-cited commitment on 2°C; requires the European Council to increase the 2030 target to, at least, an 80% reduction in emissions.

Alternatively, if the Green Paper's 40% target is adopted, the EU should be honest about why it has chosen to renege on its previous 2°C commitments. Moreover, it should explain the reasoning for judging the challenges of stringent mitigation as more onerous than the increased risk of dangerous repercussions for poorer and climatically more vulnerable communities.

I understand the enormous political difficulties for European heads of state in developing a transparent and evidence-based mitigation agenda. However, the reasons for today's climate dilemma reside in our prolonged abject failure to set in train an effective programme of mitigation. A quarter of a century on from the IPCC's first report, the carbon intensity of a typical EU citizen's lifestyle remains unchanged [7]. I urge you to resist the vested interests calling for continued inaction and instead drive for an ambitious policy framework "*consistent with science*" and developed on "*the basis of equity*". Ultimately, this will be the legacy we bequeath to future generations.

Yours sincerely

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Notes:

[1] Green Paper, A 2030 framework for climate and energy policies. Brussels, 27.3.2013 COM(2013) 169 final

[2] Report of the Conference of the Parties; fifteenth session; Copenhagen, 7 to 19 December 2009. See also: President Barroso on the results of the L'Aquila summit; European Commission, MEMO/09/332; 10/07/2009 http://europa.eu/rapid/press-release_MEMO-09-332_en.htm

[3] This is the language used by the IPCC in the AR5 to provide a qualitative interpretation of quantitative probabilities. It is based on the Guidance Note for Lead Authors of the IPCC Fifth Assessment Report on Consistent Treatment of Uncertainties. IPCC Cross-Working Group Meeting on Consistent Treatment of Uncertainties. Jasper Ridge, CA, USA. 6-7 July 2010

[4] IPCC Summary for Policy Makers; Working Group III Table 6.3, p.12. The precise budget range is 630 to 1180 GtCO₂

[5] With the surge in construction required to transition to a low-carbon infrastructure alongside ongoing industrialisation within poorer nations, reversing the 6.9% p.a. growth in emissions from cement will be extremely challenging. The assumptions used in this letter rely on deforestation and cement emissions, for the century, totalling 100 and 200GtCO₂ respectively. For cement this relates to either: 1) an immediate halving in current growth rates with a transition to zero emissions by 2075; or, 2) a continuation at current rates to 2030 with a transition to zero emissions by 2050.

[6] Once deforestation and cement emissions are included the remaining budget range for energy-only is ~190 to 740GtCO₂ for 2015-2100. Emissions for 2014 will be around 37GtCO₂, hence the 5 to 20 year estimate. It is important to note that global emissions are currently growing at ~3% p.a., and that there is no prospect of this changing significantly before 2020, by when emissions from energy will be ~42GtCO₂.

[7] Calculated from consumption-based inventories where emissions from imports and exports are also included. Territorial and consumption-based data is available for the EU28 region and individual EU nations from the [Global Carbon Atlas](#).

[8] For a detailed account of these conclusions in for Annex 1 and non-Annex 1 nations, see: Anderson K, Bows A. [Beyond dangerous climate change: emission pathways for a new world](#). Phil Trans R Soc A: Math Phys Eng Sci 2011, 369:20–44.

* This letter builds on a [previous submission](#) (13.12.2013) to the EU Commission President with regards to the Green Paper A 2030 framework for climate and energy policies. Brussels, 27.3.2013 COM(2013) 169 final