

## Briefing: EU: 40% by 2030 is not enough to keep temperature rise below 2°C

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### 1. Introduction

There are many social and economic arguments for increasing greenhouse gas emission reductions in the EU, including protecting health, reducing economic costs, creating new jobs, increasing energy security and more, as evidenced in the European Commission's *Impact Assessment for its Communication of the policy framework for climate and energy for the period from 2020 to 2030*<sup>1</sup>. Above all, many studies have shown there also is an enormous potential to achieve these reductions through e.g., reducing energy consumption and increasing renewable energy. However, this briefing focuses on the need for the EU to go well beyond the Commission proposed target of 40% by 2030 in order to stick to its long-term commitment to keep temperature rise below 2°C.

### 2. Two degrees commitment

The European Union adopted in 1996<sup>2</sup> the objective to contribute to keeping global temperature rise since pre-industrial times below 2°C and repeated this commitment time and time again. Ultimately at the Climate Summit in Cancun in 2010, the EU convinced the rest of the world to adopt the same objective<sup>3</sup>. Achieving this objective should be the EU's cornerstone of the 2030 climate and energy policy framework, and should guide the definition of the 2030 target.

### 3. IPCC assessment of scenarios to achieve 2°C

Based on an assessment of available scenarios, the Intergovernmental Panel on Climate Change (IPCC) 2007 *Fourth Assessment Report (AR4)*, identified that in order to have a likely chance to stay below 2°C, global emissions would need to peak before 2015, and at least be halved by 2050 (as compared to 1990 levels)<sup>4</sup>. How such global emission reductions would be shared amongst different countries is dependent on how one would define fair shares. The UN Framework Convention on Climate Change stipulates that the effort should be shared on the basis of "common but differentiated responsibilities and respective capabilities"<sup>5</sup>.

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1 European Commission (2014) Commission Staff Working Document Impact Assessment. A policy framework for climate and energy for the period from 2020 to 2030.

2 European Union. Council of Environment Ministers (1996) 1939th Council Meeting. Luxembourg. 25-26 June 1996: "the Council believes that global average temperature should not exceed 2 degrees above pre-industrial levels"

3 UNFCCC (2010) Decision1/CP.16. The Cancun Agreements: Outcome of the work of the Ad-Hoc Working Group on Long-Term Cooperative Action under the Convention: "with a view to reducing global greenhouse gas emissions so as to hold the increase in global average temperature below 2 °C above preindustrial levels, and that Parties should take urgent action to meet this long-term goal"

4 IPCC (2007) Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change: *Summary for Policymakers* and *Chapter 13. Policies, Instruments and Co-operative Arrangements*.

5 UN (1992) Framework Convention on Climate Change. Article 3: "The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities."



AR4 assessed that, in order to stay below 2°C, industrialised countries like the EU should reduce their emissions by 25 to 40% by 2020 and by 80 to 95% by 2050, all compared to 1990 emission levels.

#### 4. EU's long-term emission reduction objective

On the basis of AR4, the European Council adopted a commitment to reduce its 2050 emissions by 80 to 95% (as compared to 1990 emissions)<sup>6</sup>. This in turn formed the basis for the European Commission's 2050 Low Carbon Roadmap.<sup>7</sup> The Roadmap, however, only includes a pathway to reducing emissions by 80% and does not provide a pathway to reducing emissions by 95%. It is this Low Carbon Roadmap that formed the basis for the Commission to propose an emission reductions target of 40% by 2030.

#### 5. Further scientific assessments for UNEP

The EU's 80 to 95% target cannot be separated from the other elements of the IPCC scenarios to keep temperature rise below 2°C: peaking emissions before 2015 and reducing emissions to 44 GtCO<sub>2</sub>-e by 2020. The assessment by leading IPCC scientists for UNEP's *2013 Emissions Gap Report*<sup>7</sup> indicates clearly that the world is not on track to achieve the needed reductions by 2020 and will likely miss it by 8 to 12 GtCO<sub>2</sub>-e. This is partially due to the fact that the European Union's 2020 target is not in line with the IPCC's assessment of needed reductions by industrialized countries between 25 and 40% by 2020.

Based on this, the recommendation of the Emissions Gap Report is clear: if global emissions are not reduced to 44 GtCO<sub>2</sub>-e by 2020, then all countries (including the EU) need to increase their post-2020 targets. For the EU this clearly means that, in order to be in line with scientific recommendations for staying below 2°C, instead of looking at an 80% emission reduction by 2050, it should rather aspire to reduce emissions by close to or beyond 95% by 2050.

#### 6. Update on IPCC AR4

In a recent study to update their previous work for IPCC's AR4, leading authors Hohne, Den Elzen and Escalante, compared 40 effort-sharing approaches<sup>8</sup>. They conclude that in order to have a reasonable chance of staying below 2°C, emissions under all effort-sharing approaches of OECD countries should be approximately half of the emissions of 2010, and roughly two-thirds in Economies in Transition. Extrapolating these numbers to the EU15 and the new EU Member States, shows that emissions in the EU would need to be reduced by 55% by 2030, as compared to 1990 levels.

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6 European Council (2011) Conclusions. 4 February 2011: "Reaching the EU objective, in the context of necessary reductions according to the IPCC by developed countries as a group, of reducing greenhouse gas emissions by 80-95% by 2050 compared to 1990 as agreed in October 2009 will require a revolution in energy systems, which must start now."

7 UNEP (2013) The Emissions Gap Report

8 Niklas Hohne, Michel Den Elzen and Donovan Escalante (2014) Regional GHG reduction targets based on effort sharing: a comparison of studies. In: Climate Policy. Vol.14, No.1.



## 7. Domestic efforts vs. international offsets

It should be clear that in the above we are only addressing domestic emission reductions. While for the atmosphere only the global carbon budget matters, there is no guarantee that international offsets are indeed contributing to reducing global carbon emissions. There are serious doubts about the additionality of a majority of current carbon offsets. Furthermore, the presence of cheap offsets often stands in the way of domestic investments that would cost more in the short term, but actually would be beneficial in the longer run, given the need to fully decarbonise our societies in the next 30-40 years.

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**Climate Action Network Europe** is Europe's largest coalition working on climate and energy issues. With over 120 member organisations in more than 25 European countries, CAN Europe works to prevent dangerous climate change and promote sustainable climate and energy policy in Europe.