

EREF response to the public consultation of the European Commission on EU 2040 climate targets

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EREF emphasises that we absolutely need ambitious EU 2040 climate and energy targets, in form of substantial emissions reductions and clear and science-based agreement on remaining carbon budgets. This can be achieved mainly through significantly higher shares of renewable energies, which will be the dominant sources of electricity, and through direct and indirect electrification also for other end-uses, such as heating & cooling and road transport. Exploiting untapped potentials of energy efficiency improvements will have to be the other pillar of the transformation towards carbon neutrality.

In this respect, **EREF cautions to bet on Carbon Dioxide Removal (CDR) technologies.** While acknowledging innovation and research into CDR technologies is important, we should focus on avoiding GHG emissions wherever possible, rather than relying on future solutions that include carbon removal (or storage). Current CDR pilots are still unable to remove CO₂ on a large scale and are far from being economically viable. Emphasizing CDR technologies thus risks greenwashing and directing investments away from more effective and readily available solutions. Focussing on removal and storage will mainly be an extended lifeline for fossil fuels and ultimately results in huge amounts of stranded investment, instead of providing investment security and guidance towards the various renewable energy and energy efficiency solutions.

Instead, EREF encourages decision-makers to prioritize nature-based solutions for carbon removal such as ecosystem restoration, reforestation, regenerative agriculture and sustainable land management. All of these can enhance carbon sequestration, conserve biodiversity, improve water quality, and limit the risks and frequency of natural disasters. By integrating nature-based solutions into climate policies, the EU can promote resilient ecosystems and sustainable development.

EREF advocates the **2040 emission reduction target to be set at a minimum of 90% to 95%, compared to 1990 levels.** This level of ambition will set Europe on track towards net-zero and accelerate decarbonisation across all sectors, mostly energy, transport, buildings, agriculture, and industry. By setting a high bar, the EU will inspire other regions and nations to follow suit, ensuring a collective effort towards a sustainable and resilient future.

EREF calls for a **legally binding definition of remaining Carbon Budget** to ensure transparency and accountability for the EU and each Member State. This definition should include clear milestones for 2035 and 2040 and enable a robust monitoring and reporting mechanism that allows for stock-taking and progress evaluation and the consequent introduction and implementation of stronger measures in case of shortcomings. National

roadmaps for emissions reductions will help Member states to align their policies and actions, which are formulated under the National Energy and Climate Plans (NECPs), with the EU's overall objectives and thus facilitate a cohesive and effective approach to climate action.

EREF believes that for actual achievement of an ambitious 2040 GHG-reduction target it is indispensable to also define and enact ambitious targets for the share of renewable energy. We recommend a **target of at least 80% renewable energy in the gross final energy consumption by 2040 including sector sub-targets** (industry, heating and cooling, transport, etc.). **The electricity sector should aim at 100% renewable energy by then, with the other sectors following soon afterwards.**

To achieve the necessary ambition the current governance system should be revised to re-install **legally binding national targets for each Member State**. In contrast to the current NECPs, taking individual responsibility of Member states would result in more effective implementation and enforcement of the climate and energy targets. Mandatory national targets would increase investments through better long-term planning and security among investors and project developers in renewable energies.

To support the needed efforts and to help policy development, EREF calls on the **European Commission to model at least one 100% renewable energy scenario using all available renewable energy technologies**. The impact assessments and modelling should include the existing real costs of renewables rather than be based on higher assumptions as this was done in the past. The scenario should further address additional topics such as excess and waste heat, as well as the need for increased system flexibility and decentralised infrastructures that are designed to support substantive renewable energies development.

Fossil or nuclear based technologies should no longer be promoted in EU markets and systems. New investments and support schemes for both technologies must be phased out within the next few years in order to avoid lock-in effects and delayed decarbonisation. Nuclear and other inflexible baseload be phased out as soon as possible, as it is not compatible with an energy system based on very high shares of renewables, particularly including variable and dispatchable renewables.

The preparations for the EU 2040 climate targets should emphasize **steps towards full decarbonisation of hard-to-abate sectors for the last decade before reaching net-zero by 2050 the very latest.**

In parallel, energy efficiency must be prioritized to maximize the effectiveness of energy use. Setting ambitious targets and enacting and implementing enabling legislation and regulation for energy efficiency will contribute to emission reductions and long-term sustainability.