

Frequently Asked Questions – ETC Energy Security Briefing Paper

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Section 1: About the ETC

What is the Energy Transitions Commission and what is its mission?

The Energy Transitions Commission (ETC) is a global coalition of leaders from across the energy landscape committed to achieving net-zero emissions by mid-century in order to limit global warming to well below 2°C and as close as possible to 1.5°C.

Our Commissioners come from a range of organisations – energy producers, energy-intensive industries, technology providers, finance players and environmental NGOs – which operate across developed and developing countries and play different roles in the energy transition. This diversity of viewpoints informs our work: our analyses are developed with a systems perspective through extensive exchanges with experts and practitioners. Our ambition is to inform the decisions of public and private decision-makers and support the leaders at the forefront of climate action to speed up the deployment of low and zero carbon solutions.

A list of our commissioners can be found here: <http://www.energy-transitions.org/who/>

Who funds the ETC?

The ETC is primarily funded by the organisations with which our Commissioners are affiliated. Membership fee levels depend on the size and nature (for-profit or not-for-profit) of the organisation. Commissioners all have equal voice and representation on the Commission regardless of whether their affiliate organisation finances the ETC or not. In addition, some of the ETC's work programmes, in particular the ETC's work in China and India, are funded by philanthropic organisations.

The funding we receive finances the ETC's secretariat, analytical programmes, stakeholder outreach and communications.

Who are the Commissioners and how were they selected?

As of July 2021, the Commission's membership includes over 50 leaders coming from energy companies, energy-intensive industries, technology providers, financial institutions, environmental NGOs and academia. They operate across developed and developing countries and play different roles in the energy transition. Commissioners are selected based on their commitment to working towards a net-zero-emissions economy by mid-century.

We endeavour to diversify the Commission's membership in terms of sector, nationality and gender. The Commission is chaired by Lord Adair Turner who works alongside Faustine Delasalle, Director ETC. A list of Commissioners and ETC team members can be found on our website at <http://www.energytransitions.org/who-we-are>.

Are the organizations with which your members are affiliated backing this report?

This report constitutes a collective view of the Energy Transitions Commission. Members of the ETC endorse the general thrust of the arguments made in this report but should not be taken as agreeing with every finding or recommendation. The institutions with which the Commissioners are affiliated have not been asked to formally endorse the report.

Why is [a given Commissioner] not available for questions?

Some of our Commissioners are unfortunately unavailable for questions due to prior commitments, but five global reports have now been developed by the Commissioners who not only agree on the importance of reaching net-zero carbon emissions from the energy and industrial systems by mid-century, but also share a broad vision of how the transition can be achieved.

Why have not all ETC Commissioners endorsed the report?

Nearly all our Commissioners have endorsed the briefing paper. A few were unable to formally endorse the report before publication due to procedural formalities within their organisation, or have only very recently joined the Commission and therefore were not able to participate in the development of the report.

How does the ETC balance achieving impact with the demands of fossil fuel members?

Commissioners all have equal voice and representation on the Commission. We believe it is critical that the ETC brings together voices from across all sectors, including energy intensive industries, in order to design realistic yet ambitious pathways to net-zero emissions and mobilise all key stakeholders towards this goal. All members of the ETC have agreed to work together to pursue a global net-zero emissions target by mid-century. Our reports are anchored in robust quantitative and qualitative analyses, which are stress-tested and refined with a large panel of experts coming from both our members' organisations and a broader network. The ETC creates a unique space for open dialogue, creating the right conditions for change and advancing the climate agenda.

Does the ETC speak to the challenges of both developed and developing countries?

The ETC develops global roadmaps, while highlighting differences between regional pathways, especially between developed and developing countries. We work with local partners – in China, India, Europe, U.S. and Australia – who have deep country knowledge and play a key role in strengthening and stress-testing our global analyses in light of regional specificities.

The ETC believes that all rich developed economies should and can reach net-zero emissions by 2050 and all developing countries by 2060 at the latest, but that developing countries will require development finance to de-risk and crowd-in private investment. However, some developing countries may be able to achieve full decarbonisation by 2050 or earlier, for example, because they are blessed with significant potential solar and wind resources, dramatically reducing decarbonisation costs.

ETC reports examine scenarios for developed and developing markets. Overall, achieving massive electrification and early power sector decarbonisation, ahead of economy-wide decarbonisation, must be at the heart of all countries' paths to net zero. The ETC calls for developed and developing countries to adopt strategies to achieve grid emissions intensity below 30gCO₂/kWh by the mid-2030s and mid-2040s, respectively.

Section 2: About the paper and its impact

Why have you developed this report and who is the target audience?

The ETC's main role is to provide an evidence-based perspective to inform public sector and corporate decision makers regarding the energy transition. This Insights Briefing has been developed with the aim of explaining and informing a broad audience.

What is the main focus of the report?

The key focus of the brief is on the medium term actions (2-8 years) which could improve energy security, stability of supply and limit the impact of future fossil fuel price shocks by 2030. The paper highlights desirable actions that Europe could take to rapidly reduce reliance on Russian gas imports without diverting from the path to a net-zero economy. The paper outlines recommendations to policymakers to deliver energy security while minimising the impact on consumers and accelerating the transition to net-zero.

How much of the report is constituted of new analyses vs. integration of previous publications, and who has carried out the analysis?

The work has been developed by ETC Commissioners with the support of the ETC Secretariat, provided by SYSTEMIQ. This paper draws upon previous ETC work including the "Making Mission Possible" series of reports.

Section 3: Net-zero targets

The term "Net Zero" is used a great deal – but what is "Net Zero" and why should we set "Net Zero" targets?

The concept of "net-zero emissions" is based on the climate science and what we must do to limit global warming. The IPCC's illustrative pathways for limiting global warming to 1.5°C indicate that CO₂ emissions need to be reduced to net-zero globally by around 2050. In this expression, the "net" reflects the fact that there may still be a small amount of residual emissions by 2050 – the ETC estimates that 2-4 Gt of CO₂ might still be emitted by the energy system – and those should be compensated by negative emissions, obtained via carbon removals (for instance from afforestation or DACCS).

We must therefore aim to decarbonise the economy by mid-century, reducing CO₂ emissions from energy, industry, transport and buildings to as close to zero as possible. Net-zero goals and targets are powerful, because they give us this galvanising clarity of action for government, business, and civil society, focusing the minds on a tangible objective associated with a clear timeline. They are a vital step in accelerating progress and urgency as we must act now to deliver them.

But achieving net-zero in these sectors alone will be insufficient to limit global warming to 1.5°C for three reasons.

- First, as CO₂ accumulates in the atmosphere, it is the total cumulative amount of emissions between now and 2050, and therefore the pace of emissions reduction, that will matter for global warming; this carbon budget is currently estimated at 500 Gt from 2020 by the IPCC. Cutting emissions fast in the next decade will be necessary to avoid an "overshoot" of the carbon budget - given potential feedback loops and tipping points within the climate system, it is unacceptably risky to rely on large scale negative emissions later in the century. IPCC

pathways which avoid such reliance show that CO₂ emissions need to be cut from today's 40 GtCO₂ to below 25 GtCO₂ by 2030.

- Second, beyond the energy, industry, transport and buildings sectors, emissions from waste, agriculture, food and land-use should also be taken into account
- Finally, non-CO₂ emissions, in particular nitrogen oxide and methane emissions, also contribute to global warming effects and need to be cut.