Energy Transitions Commission

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Commissioners Meeting
Summary Note
Thursday 26th June 2025

Thursday 26th June 2025, 8.40 - 17.00 UKT

Time	Topic
8.40 – 9.00	Welcome tea & coffee followed by seating
9.00 – 9.10	Introduction
9.10 –11.00	**State of the global energy transition & implications for the ETC** • Emissions trends, technology progress and deployment over the past year • Understanding geopolitical dynamics and climate in key regions (US, China, EU, India, RoW) and the implications for COP 30. • Debating the implications for the 1.5ºC temperature goal and the ETC's work messages
11.00 – 11.20	**Break**
11.20 –12.35	**Spotlight on two topical transition debates** – *Commission discussion* • **New Net-Zero narratives**: the role of the ETC in course-correcting global energy discussions • **The role of nuclear** in the energy transition
12.35 – 13.25	**Lunch**
13.25 –15.25	**Emerging insights from the ETC's analytical work programmes** • Advancing energy productivity: an energy (and electric) growth story • Key messages from the upcoming ETC report on power systems transformation • Decarbonising the last 20%: the role of low-carbon molecules and trade-offs between alternative low-carbon routes
15.25 – 15.45	**Break**
15.45 – 17.00	**2026 and beyond: shaping the future ETC work programme** • Highlights and impact in 2025 to date • Strategy, priorities and workplan for 2026
17.00	**Conclusion & Wrap-up**

Key discussion takeaways

The ETC would like to thank its Commissioners for their active participation at the meeting and the rich discussion. This note captures the main takeaways from the discussions and all materials from the meeting are available for download on ETC Member portal. Please note that these are internal documents not to be shared beyond your organisation.

1. State of the global energy transition & implications for the ETC

The ETC team provided a high-level overview of global emissions, policy, and investment trends shaping the energy transition. In 2024, global energy-related CO_2 emissions reached a record high, though emission growth slowed due to progress in developed countries and China. Energy demand surged outside Europe, driven by renewables, but the world breached the 1.5°C threshold for the first time. Methane emissions and deforestation remain major challenges, with only limited regional improvements. Climate action is uneven, with slow progress on national

pledges ahead of COP30 and current policies pointing to 2.4°C warming. Green investment is rising, including in emerging economies, but remains far below what's needed, especially for grid infrastructure and across the Global South. Clean tech adoption is accelerating, yet progress remains inconsistent and insufficient for a 1.5°C pathway.

ETC members covered several cross-cutting themes during the discussion:

- On infrastructure and system readiness, it was raised that while investment in power generation is accelerating, especially for renewables, investment in grid infrastructure is not keeping pace. Grid development and financing was seen as a major constraint in many countries, despite its critical role in enabling clean energy deployment.
- Relatedly, the importance of measuring progress in real capacity terms, not just financial investment, was emphasised, particularly as the cost of technologies continues to fall.
- In terms of finance and policy mechanisms, the members debated the effectiveness of carbon credits in supporting coal phase-outs, particularly in Indonesia, with many pointing to the need for more robust financial and regulatory tools such as public funding or carbon pricing.
- On demand-side decarbonisation, industrial sectors were highlighted as facing steep cost premiums for low-carbon materials, raising concerns that voluntary demand would be insufficient to scale these markets and mandates or market-based mechanisms were seen as necessary.
- A notable area of concern was rising cooling demand, particularly in China and the Global South and members called for greater focus on building standards, urban planning, and cooling technology innovation.
- Finally, on narrative and communication, the importance of clearly conveying progress, especially China's emissions trends and cleantech leadership, was stressed, both to counter political scepticism and to support international cooperation. The timing and likelihood of the "green premium" disappearing for key technologies was also flagged as a critical factor shaping future policy choices.
- On geographic scope, members noted the absence of coverage on regions such as the Middle East, Japan, and Korea, despite their significant green industrial investments and policy ambition, and suggested that these should be included in future discussions.

Members also acknowledged that a 1.5°C pathway is now likely out of reach, and that achieving well below 2°C depends largely on developing countries, with China's role especially pivotal.. The session highlighted that the cost of clean technologies is falling, especially in solar, batteries, and EVs, which are reaching or surpassing parity with fossil alternatives in the Global South. However, technologies like heat pumps and industrial decarbonization decarbonisation still face persistent cost barriers. Geographic differences in renewable generation and green hydrogen economics are likely to shape future industrial patterns, with the sun-belt hopefully to emerge as a leader. Finally, the importance of aligning electrification and decarbonisation pace was underscored, alongside the urgent need for smart trade policy, carbon pricing, and support for developing countries, especially Africa, to fully realise their low-cost clean energy potential.

(Session material available here)

2. **Spotlight on two topical transition debates: New Net-Zero narratives** and **The role of nuclear** in the energy transition

New Net-Zero narratives:
During this session, Molly Walton (Director, Energy, We Mean Business Coalition) shared emerging findings from a forthcoming analysis led by WMBC with ETC, Ember, and E3G. The work examines whether fossil fuel demand will materialise as expected, as clean energy increasingly displaces

fossil use across power, transport, and industry. Early insights show that clean electricity is gaining momentum globally, renewables now account for 40% of the global power mix. Businesses are aligning with this trend, in a new survey 90% of business executives considered access to renewable electricity essential for investment decisions, and half would consider relocating without it. China is leading the electrification wave, with its clean energy sectors contributing 10% of GDP and 25% of GDP growth in 2024, highlighting the scale and competitiveness of its transition. The findings point to a structural global shift away from fossil fuels, even if it is currently unevenly distributed. This underscores the need for policy to keep pace with market and technological change to avoid overinvestment in fossil infrastructure.

The session then turned to rising counter-narratives claiming the energy transition is failing. A prominent example, led by Daniel Yergin and others, argues that net-zero ambitions are unrealistic, energy demand growth is being unfairly constrained, and energy security requires continued fossil fuel use. These narratives, often tied to US industrial and geopolitical concerns, also cite outdated fears about mineral scarcity and call for American dominance in clean tech. The ETC members discussed if and how to respond, and where members generally thought it was right for ETC to intervene in these debates, and key points included reaffirming that energy services can grow while reducing fossil use, highlighting recent progress in clean deployment and cost reductions, and reinforcing the centrality of strong public policy. The ETC members shared concern that voluntary corporate commitments will not deliver without regulatory pressure and stressed the need to reshape the narrative to counter rising scepticism.

(Session material available here)

The role of Nuclear in the energy transition:
The ETC team introduced upcoming work on the role of nuclear in decarbonised energy systems. In the latest report, ETC analysis has shown that power systems can reach 70–80% variable renewables, the ETC is now exploring whether nuclear (and geothermal) will be needed to complement this – particularly in regions with land constraints or system reliability concerns. The framing focused on three key questions: (1) What is the role of nuclear in future energy systems? (2) What can we learn from past deployment? (3) How can nuclear become more cost-effective?

The ETC members raised key points: the need to clearly define "nuclear for what?", the limits of nuclear as a flexibility resource, and the challenge of integrating high-capex, inflexible baseload in renewable-heavy systems. The ETC Commissioners stressed the importance of full system cost comparisons (including decommissioning and waste), institutional capacity in developing countries, and the cost increase risks of fragmented SMR designs. Both the issue of workforce availability and how the fragmentation of nuclear regulation and design leads to the risk of longer project timeline and cost overruns.

Despite economic headwinds, several members noted that governments may pursue nuclear for strategic reasons, such as industrial policy or energy sovereignty, regardless of strict cost-benefit logic. A suggested reframing was to assess what key guidelines would be for countries if they decided to pursue nuclear regardless of whether it was theoretically the best system choice. This workstream will explore these issues, aiming to provide evidence-based guidance on the role of nuclear in the energy transition and principles around nuclear deployment.

(Session material available here)

3. Emerging insights from the ETC's analytical work programmes

Advancing energy productivity: an energy (and electric) growth story

The ETC team highlighted electricity's growing share in final energy demand and its central role in decoupling energy use from GDP growth. ETC presented its "unconstrained scenario" for 2050, emphasising electrification as the primary driver of efficiency, including opportunities in the hard-to-abate sectors. The analysis showed that final energy demand could fall by 50% relative to business-as-usual in 2050, this means decreasing today's level of final demand by 25% while delivering 60% more energy services than today. The framing around primary, final, and useful energy was used to illustrate how rising services can be achieved with less energy, provided efficiency measures are adopted widely and early.

The ETC Commissioners highlighted how important this topic was and the need for a clear, compelling narrative to broaden the appeal of energy efficiency beyond technical audiences. Tangible outcomes including improvements to quality of life (e.g., better transport services, more comfortable homes) and lower costs need to be the top messages of the publication. Several ETC Commissioners suggested further detailing the investment needs, and implementation mechanisms, such as national energy efficiency targets, subsidies, and regulation to make recommendations even more actionable and clear on who will bear and how much is the additional costs. Other members noted the value of emphasising sector-specific priorities, including digitalisation, recycling, and stock turnover, particularly in fast-growing economies. It was also noted that the framing could benefit from highlighting co-benefits such as flattening grid load profiles and using language that focuses on upgrading and modernising rather than simply reducing. China's electrification and trade-in scheme for appliance upgrades was cited as an example worth referencing. Finally, it was agreed that the analysis need to explicitly connect with real-world applications and prioritise the levers that can deliver the most benefit, supporting a clear and effective communication on energy efficiency making the theme less "boring" to ensure higher interest and uptake.

Key messages from the upcoming ETC report on power system

The ETC team previewed findings from its latest *Power Systems Transformation* report, showing that systems with over 80% wind and solar are technically and economically viable using today's technologies. Costs will vary by region, with wind-heavy systems requiring more balancing. Demand-side flexibility could meet up to 30% of global demand, while long-distance transmission and advanced grid technologies can cut costs and limit new grid build. Modelling across India, the UK, China, and Spain highlights cost advantages in Sun belt regions and the role of limited gas in Wind belt systems. A six-pillar framework was shared to support rollout, covering planning, markets, regulation, digitalisation, supply chains, and consumer engagement.

ETC Commissioners welcomed the case study and raised key points on equity in rooftop solar access, the value of innovative grid technologies (IGT) in limiting grid expansion, and the need for dynamic contracts to drive consumer flexibility. They stressed the importance of reconductoring to avoid greenfield opposition, highlighted unplanned rooftop solar growth in China and Pakistan, and called for market designs that accommodate microgrids. Commissioners also flagged concerns about scaling ultra-long duration storage and cautioned against rigid decarbonisation targets when low-cost offsets could address residual emissions more effectively.

Decarbonising the last 20%: the role of low-carbon molecules and trade-offs between alternative low-carbon routes

In the work on Low Carbon Molecules presented by ETC during the commissioners meeting, the

focus was on defining the limited but critical role of carbon molecules in a net-zero system. Building on prior analysis of electrification and hydrogen, the work quantified how much carbon will still be needed for sectors such as aviation, shipping, and high-temperature industry. It then assessed how this carbon could be sourced, whether through biomass, direct air capture, or point-source capture, and analysed the full carbon mass balance. This included how carbon is captured, processed, utilised across different sectors, and where it ultimately ends up, such as in long-lived products, or atmospheric release.

This framing prompted discussion around the importance of not portraying molecules as a failure of the energy system. The ETC Commissioners highlighted the need to present these solutions as effective abatement tools in sectors without better options. Another reoccurring message was the call for a simpler, more concrete narrative. Rather than focusing on general efficiency comparisons, the ETC members recommended providing clear guidance on where molecules are genuinely needed and under what conditions which would help turn the analysis into specific policy and investment choices. A third point raised was the need to keep efficiency concerns in perspective. While these fuels may have higher energy losses, they can still contribute to meaningful emissions reductions and play a valuable role in the broader system. The feedback received will be implemented and reflected in the final reporting phase of the work, which is planned to finish in September 2025.

(Session material available here)

4. 2026 and beyond: shaping the future ETC work programme

In this session, the ETC team presented highlights and impact in 2025 to date, including the ETC being mentioned in over 1200 recent news stories, ETC newsletter growing to over 30,000 subscribers, and the team speaking at over 50 events across the world. The proposed workplan for 2026 was also highlighted, including finishing key reports on low-carbon baseload: nuclear and geothermal, the economics of the transition; developing initiatives in Brazil and Indonesia. The ETC team put forward a proposal for evolving our approach with more agile analysis and increased engagement, retaining analytical focus on core areas and expanding our engagement efforts through working broader with partners.

The ETC Commissioners largely agreed that ETC should play a stronger role in the narrative space, as it is harmful to let the narrative from anti-renewable press to go unchecked and ETC are an organisation with a robust analytical reputation to provide convincing rebuttal. It was emphasised that it may be most important for the ETC to focus on the economics perspective, showing that clean energy technologies are getting cheaper whilst delivering domestic energy security and reducing reliance on imports. The ETC Members expressed interest in better tracking the impact of ETC communications efforts including social media metrics.

The ETC Members expressed strong support for a comprehensive State of the Energy Transition publication approximately oh every two years. The ETC Commissioners also emphasised that, in the coming years, a shorter-term approach to analysis and communications would be particularly impactful, as countries are keen to see the tangible results of action within the next 2–10 years. The importance of better leveraging the communications networks of our member organisations, was highlighted and a suggestion of ETC chatbot to support members, the press, and the wider climate stakeholder community was discussed in more effectively accessing and utilising the ETC's fact base and reports.

(Session material available here)