

**Energy Transitions Commission
Representatives Meeting
Summary note
Thursday 15th May, 2025**

Thursday 15th May, 8.30 am – 4.00 pm UKT

Time (UK)	Agenda
8.30 – 8.45	On-site arrival from 8.30 AM UKT with welcome tea & coffee followed by seating. Virtual Zoom link accessible from 8:30 AM UKT, and the meeting commenced at 8:45 AM UKT.
8.45 – 8.55	Welcome and Introduction
8.55 – 9.45	Global trade and the transition to net-zero: challenges and ETC approach
9:45 – 10.30	Power systems transformation: summary of member comments and way forward for the upcoming ETC report
10.30 – 10.45	Break
10.45 – 13.00	Accelerating energy productivity: comprehensive findings and how to communicate <i>Workshop format with external attendees invited</i>
13.00 – 14.00	Lunch
14.00 – 14.30	Low carbon molecules: Introducing the scope and initial insights from phase 3 – costs and sourcing of carbon molecules
14.30 – 15.15	Carbon Credits & SBTi guidance: closing the gap
15.15 – 15.30	Break
15.30 – 16.00	Looking ahead to key climate events: LCAW, NYCW, COP
16.00	Conclusion and wrap-up

Key discussion takeaways

The ETC would like to thank its Representatives 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. Global trade and the transition to net-zero: challenges and ETC approach

Global trade is seeing high levels of tariffs, as a result of US President Donald Trump. Within overall trade, two factors are particularly relevant to the low-carbon transition: the role of Chinese manufactured technologies vs. domestically produced equivalents, and carbon border adjustment mechanisms.

The ETC secretariat presented an overview of the upcoming trade briefing. In the first part, six principles for nearshoring clean technologies were revisited, backed by data underpinning the relative cost differentials for technologies produced within and outside of

China. It was noted how countries are seeking to nearshore some technologies and using tariffs to attract domestic manufacturing: India has reduced EV import tariffs for firms committing at least \$500 million to local production, prompting announcements from Tesla and Leapmotor; Indonesia has tied tariff reductions to local content requirements (rising to 60% by 2027); and Turkey has offered tariff relief in exchange for domestic investment – which has led to BYD's recent \$1 billion commitment. These examples demonstrate how countries are using trade policy as a tool not only for energy security, but also for industrial development. The issues around how much of global supply chains can be localised and drawing the distinction between historical and future subsidies was also highlighted by the ETC representatives.

The final section turned to Carbon Border Adjustment Mechanism (CBAM) and global carbon pricing coordination. With the EU ETS and CBAM in place, the EU is on track to reach zero emissions from covered sectors by 2039, a target further supported by the EU's new steel and metals plan. To scale carbon pricing internationally, the discussion emphasised the importance of standardised carbon intensity definitions (potentially led by the WTO) and the strategic use of CBAM revenues to support climate finance in lower-income countries.

Representatives welcomed the forthcoming piece, noting the need for it to reflect the differentiation between current and prior subsidies for clean technologies in different regions; the fact that many parts of supply chains are created by highly specialized suppliers, meaning it could be impossible to nearshore them; there have been cases of JVs that have not resulted in knowledge transfer; and countries should really focus on technologies that are "scarce" (e.g., where current production is nowhere near demand and where there are long wait-times); and that CBAM should be promoted but it must also be recognised that bureaucratic difficulties related to CBAM implementation are not just limited to low-income countries but also to reporting entities in Europe.

The ETC's trade briefing note will be published on June 10th.

(Session material available [here](#))

2. Power systems transformation: summary of member comments and way forward for the upcoming ETC report

The ETC Team shared their key messages for the upcoming power systems transformation report in order to open up the discussion amongst members on key areas. The five key messages discussed centred around the foundation of clean electrification to a net-zero economy; the technical and economic feasibility of balancing the grid; the importance of grid growth and investment; that total system wholesale and grid costs can be lower or close to today's, dependent on the region; delivering this system requires six key enablers, with a focus on market design and grid regulations.

The team then shared some of the comments submitted by members. Representatives discussed the importance of using the Spain and Portugal case study as an example of grid stability and system planning coming to the fore (with data presented by our member Iberdrola on the event and its causes); the differences in costs and challenges across developed and developing markets, in addition to the particular challenges faced by northern latitude, wind generation-focused countries. Representatives also noted the importance of electrification happening alongside decarbonisation, particularly in its importance of keeping consumer costs low. Lastly, the ETC Representatives discussed the

challenge posed by data centers and AI, and how that will influence power demand – an issue the ETC team will return to in the summer Commissioner meeting. The team thanks all their members for their helpful interventions, and are looking forward to integrating them into the report, due to be published in July.

(Session material available [here](#))

3. **Accelerating energy productivity:** comprehensive findings and how to communicate

In this ETC expert workshop, the team presented the strategic case for energy productivity as the cornerstone of the energy transition, highlighting its importance to deliver deep decarbonisation while reducing system costs, easing pressure on infrastructure, and enhancing energy security. Historically, energy productivity has improved gradually – about 1–1.2% per year – driven by technology advances, fuel switching, and structural shifts toward more service-based economies. Yet in 2024, the IEA reported a notable shift: global electricity demand grew by 4.3%, outpacing both GDP growth (3.2%) and overall energy demand (2.2%), while carbon emissions rose only marginally. This underscored the growing role of clean electricity and energy productivity in decoupling economic growth from emissions. The ETC team showed that electrification, coupled with improvements in the efficiency of appliances and vehicles, offers the largest gains in productivity, particularly in buildings and road transport. Alongside these, grid decarbonisation, material efficiency, behavioral shifts, insulation, and sector-specific levers can reduce global final energy demand by nearly 50% and primary energy by more than 50% by 2050 compared to a business-as-usual path, while growing useful energy demand by 35% from today to 2050.

The discussion explored key strategic issues for advancing energy productivity. Rising incomes and development were recognised as drivers of unforeseen energy demand, such as from data centers or increased cooling, underscoring the need to account for rebound effects. The ETC's framing of 'useful energy' increasing to 2050 whilst primary and final energy decrease was welcomed. Behavioral change was reframed to include the growing role of automated systems and connected devices, not just individual choices. It was also discussed how smaller levers in terms of overall energy savings, such as building insulation, can play a large role in managing peak demand. ETC Representatives emphasised the value of visual communication, particularly in illustrating useful energy trends and regional disparities, to make the concept of energy services more tangible. Expert participants from the IEA and RMI welcomed the ETC's contribution to the debate. Finally, the representatives stressed the importance of clear, audience-specific policy framing and strong cross-government coordination to deliver meaningful and scalable energy productivity gains. It was recommended that policy recommendations could be structured as first steps, high-priority actions, and easy wins, with attention to both short- and long-term impacts.

(Session material available [here](#))

4. **Low carbon molecules:** Introducing the scope and initial insights from phase 3 – costs and sourcing of carbon molecules

Previous phases of the ETC low carbon molecules workstream revised and defined the plausible future energy mix for 2050, showing that electrification would increase from today's levels, leaving a possible minimum of 17% of global final energy demand reliant on carbon-based fuels. This includes synthetic fuels – e.g. from bioenergy or directly captured carbon

dioxide - and residual fossil use, forming the basis of our carbon demand.

Phase 3, discussed in this meeting, focused on how to sustainably source this carbon – assessing three key sources: Atmospheric/Oceanic CO₂ (unlimited but costly), Ground-based (cheaper but high emitting), and Biomass (renewable but limited). The ETC team will build scenarios to evaluate availability, cost, and sustainability, along with end-of-life options and technology scalability.

During the discussion, several important themes emerged. First, it was noted that the ETC's previous cost estimates for DACC and storage need to be updated to reflect more recent industry estimations. This includes revisiting key assumptions in the original model, particularly around power and heat input costs. The ETC Representatives also emphasised the importance of focusing on the delivered cost of CO₂ – factoring in transport and storage – not just the capture cost, drawing a parallel to the difference between hydrogen production and delivered hydrogen. From a business model perspective, it was highlighted that companies often deploy carbon across multiple end-uses, meaning capex and revenue should be viewed across integrated value chains rather than isolated pathways. Additionally, suggestions were made to expand the innovation lens to include technologies like casein proteins and ocean alkalinity enhancement.

(Session material available [here](#))

5. Carbon Credits & SBTi guidance: closing the gap

The ETC team presented their response to the SBTi's corporate net-zero standards V2 draft consultation, building on the ETC's existing analysis of carbon credits – published in the 2022 ETC report [Mind the Gap: How Carbon Dioxide Removals Must Complement Deep Decarbonisation to Keep 1.5°C Alive](#). The ETC generally endorses the new standard set out by the SBTi and welcomes the additional action on scaling carbon credits, and proposes the following additional considerations:

- Corporate carbon removal action may be better based on the cost of decarbonisation a proportion of revenue (rather than on company size and geography)
- Companies that address their Scope 3 targets should also be required to set near-term neutralisation targets to address Scope 3 residual emissions. In support of also requiring near-term Scope 1 neutralisation targets to address residual emissions with carbon removals, which is an option proposed by SBTi.
- Beyond net-zero pathway action to address ongoing emissions, for example, with carbon removal or highly additional reduction credits (e.g., funding early coal-phase out and ending deforestation in low-income countries) should be rewarded with a “gold star” equivalent for achieving net-zero today.

ETC Representatives highlighted critical considerations around carbon removals, emphasising that the need for removals has not translated to direct market demand. They suggested reviewing scenarios presented on carbon credit demand to ensure the most realistic, not optimistic, scenarios were considered – this including recognizing the importance of forward offtake agreements and the challenges facing carbon markets today. Additionally, they underscored the vital role of governments in scaling up carbon removal initiatives, advocating for state-owned organisations to actively commit to the expansion of carbon dioxide removal (CDR) technologies, as reliance on private companies

alone may not suffice to drive significant market transformation. The briefing note *The Role of Carbon Credits in accelerated Corporate Action* has now been published and could be accessed from [here](#).

(Session material available [here](#))

6. Looking ahead to key climate events: LCAW, NYCW, COP

The ETC team presented a summary of key events attended by the team so far, and an overview of the upcoming events due to take place over the remainder of 2025. Upcoming key moments where the ETC will have a strong presence were highlighted including:

- **Energy Asia** (June 15–17), where ETC Chair Adair Turner and Head of Global Programmes, Rose Dortch will be travelling to Kuala Lumpur. Please let us know if there is anyone they should meet whilst there.
- **London Climate Action Week** (June 23–27) where ETC will be speaking at a number of events including at the Guildhall Climate Innovation Forum, and will be hosting a joint event with ETC Member Kiko Ventures on “The Art of the Possible”. Limited tickets available to members for each events.
- **New York Climate Week** (September 21–28) where ETC Chair Adair Turner will be attending. Please get in touch if you have events to recommend.
- **COP 30 Belém** (November 10–21) ETC Chair Adair accompanied with a small delegation from the ETC will be on the ground. Please get in touch if you have events to recommend

The ETC is open to further collaboration with members on communications efforts, with more information available in the slide deck. The ETC Representatives noted that the ETC should seek to join/influence the UK's Global Clean Power Alliance; that NYCW may not be as well attended this year; it would be good for ETC Commissioners to meet with the US and Chinese Administrations to understand their power priorities; and to acknowledge we now live in a VUCA (volatile, uncertain, complex, ambiguous) world, and that we may need to adapt our communications approach in light of this.

(Session material available [here](#))