



Energy
Transitions
Commission

A look ahead to the 2026 Work programme and ETC strategy

ETC Commissioners Meeting
30 October 2025

The ETC in 2025 has over 50 global members



Energy Transitions Commission

Chair
Adair Turner

Knowledge partners



BloombergNEF



Energy



Industry



Finance



Civil society

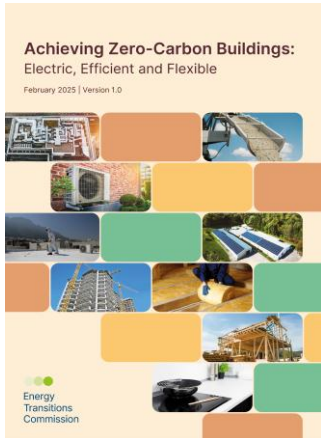


ETC Publications – Timeline 2017-2025



And continued to build on this in 2025

February



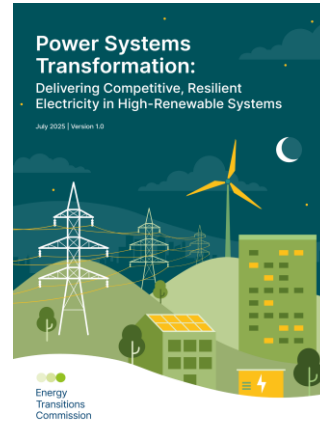
May



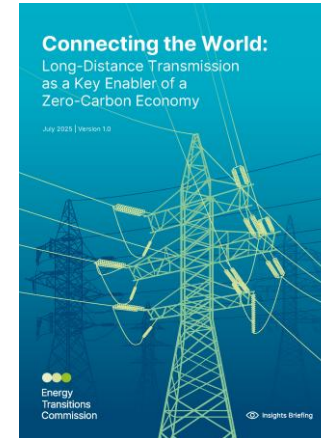
June



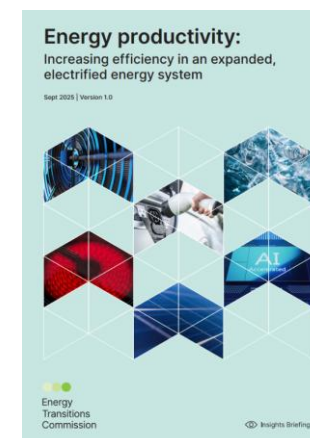
July



July



October



November



A complete picture of the buildings sector's emissions and energy use. ETC describes how a combination of electric, efficient, and flexible solutions can decarbonise buildings.

High-integrity carbon credits are required to scale up carbon dioxide removals and achieve corporate net-zero targets

Responding to SBTi's updated Net-Zero Corporate Standards consultation

Global trade can accelerate the energy transition through two key areas: following principles for nearshoring supply chains and implementing carbon pricing.

Operating and balancing power systems with high shares of wind and solar (e.g. 70-80%+) is possible through technologies existing today, delivering system stability and round-the-clock electricity.

Long-distance interconnectors play an important role in connecting low-cost clean energy to where it's needed most.

The world can more than double GDP by 2050 while cutting energy use by harnessing electrification, efficient technologies, and smarter material use.

Electrification and circularity can dramatically cut demand for carbon molecules while ensuring sustainable sourcing and safe end-of-life management resulting in zero net emissions.

Three key narratives around Net Zero have emerged in 2025

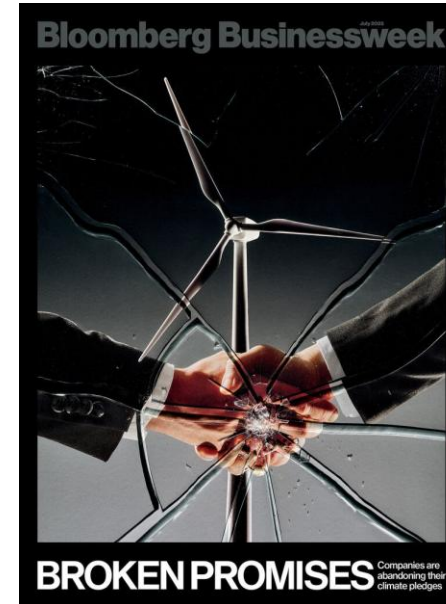
1) The energy transition is not happening/is not worth pursuing



2) Multilateralism is dead

COUNCIL on FOREIGN RELATIONS
We Need a Fresh Approach to Climate Policy. It's Time for Climate Realism
Article by Varun Sivaram

3) Corporates are stepping away from commitments



Thunder Said Energy
02 December 2024

Energy transition: losing faith?

What if achieving Net Zero by 2050 and/or reaching 1.5°C climate targets now has a <3% chance of success, for reasons that cause decision-makers to backtrack, and instead focus on climate adaptation and broader competitiveness? Can our Roadmap to Net Zero be salvaged?

Le Monde

« 2050. Pourquoi un monde sans carbone est presque impossible » : la transition énergétique n'est pas pour demain

CLIMATE & ENERGY

The Climate Paradox: Why We Need to Reset Action on Climate Change



TONY BLAIR
INSTITUTE FOR
GLOBAL CHANGE

Major banks are abandoning their climate alliance en masse. So much for 'woke capital'
Adrienne Buller

The Guardian UK



Globally there is no single energy transition narrative



China: Energy transition is a hallmark of its industrial competitiveness, geopolitical strength and likely future – despite current fossil.



USA: “Climate change is a byproduct of progress.” – US Energy Secretary Wright. Attacks on clean energy from current administration have reduced underlying progress.



EU: Attacks on net zero from right-wing parties are increasing and have influenced specific measures (e.g., heating hammer in Germany), although climate action is still a priority for a majority of voters.



India: Transitioning at a pace that recognises India’s developing economy status, whilst seeking opportunities for competitive advantage.



Africa: Narrative battle on development pathways and the role fossil fuels can play vs clean energy.



Brazil: COP host Brazil positions +80% clean power sector as world leading, promotes bio opportunity, while defending Petrobras’ rights to drill in Amazon.



LatAm: Selected concerns around impact on growth and employment influence slower pace of transition. Debates over use of gas (e.g. in cooking) at times controversial.



South/East Asia: Rapid power growth – renewables vs. LNG - & vehicle electrification. Some opposition to new projects (e.g. nickel mining). Shift in Japan against transition, particularly renewables.

Underlying points:

- Cost of living/transition vs. economic development and global competitiveness
- Energy security

New debates on Net-Zero mean more, not less, ETC type efforts are required. The challenge will be to remain distinctive and focus towards implementation.

The clean energy ecosystem

Other key actors

Focus shift towards implementation →

Not exhaustive

Analyses

Progress tracking

Mobilising decision-makers towards implementation

Global



RystadEnergy

S&P Global

Regional



Sectoral



Increasingly ETC must make itself distinctive compared to Ember, IEA



~800 staff, + country members

- Leading Net-Zero vision setters since 2021 – though now under threat from US administration
- In depth analyses with high overlap on ETC areas – but still scope for ETC to add additional insights



~80 staff, philanthropically funded

- Leading 'clean electrification' thinktank
- Focuses on data tracking of key electrification trends
- Tends to produce annual repeating outputs at a global or regional (China, Europe) level, with some additional ad hoc and country level analysis
- Unlike ETC, analysis not typically forward looking towards a key vision



Energy
Transitions
Commission

10-15 staff

+ analysis backed by >50 members

- Trusted full systems coverage: ability to lean in analytically to accelerate transition including electrification but also hard to abate sectors, hydrogen, carbon capture, bioenergy, removals and cross-cutting issues.
- Analysis focuses on 'next steps for the transition' rather than deep analysis of recent trends
- Helicopter view on global state of transition, and priorities for policymakers within it.



Proposed evolution into 2026



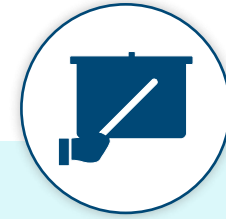
The foundations of the ETC impact model remain strong



**Fact based, collaborative,
action-oriented research
approach**



**Findings are industry-backed
and owned**



**Extensive engagement
with critical decision makers
to disseminate findings**



**ETC members own
conclusions and advocate for
recommendations externally**

**Policymakers are more
receptive to
recommendations backed by
business leaders**

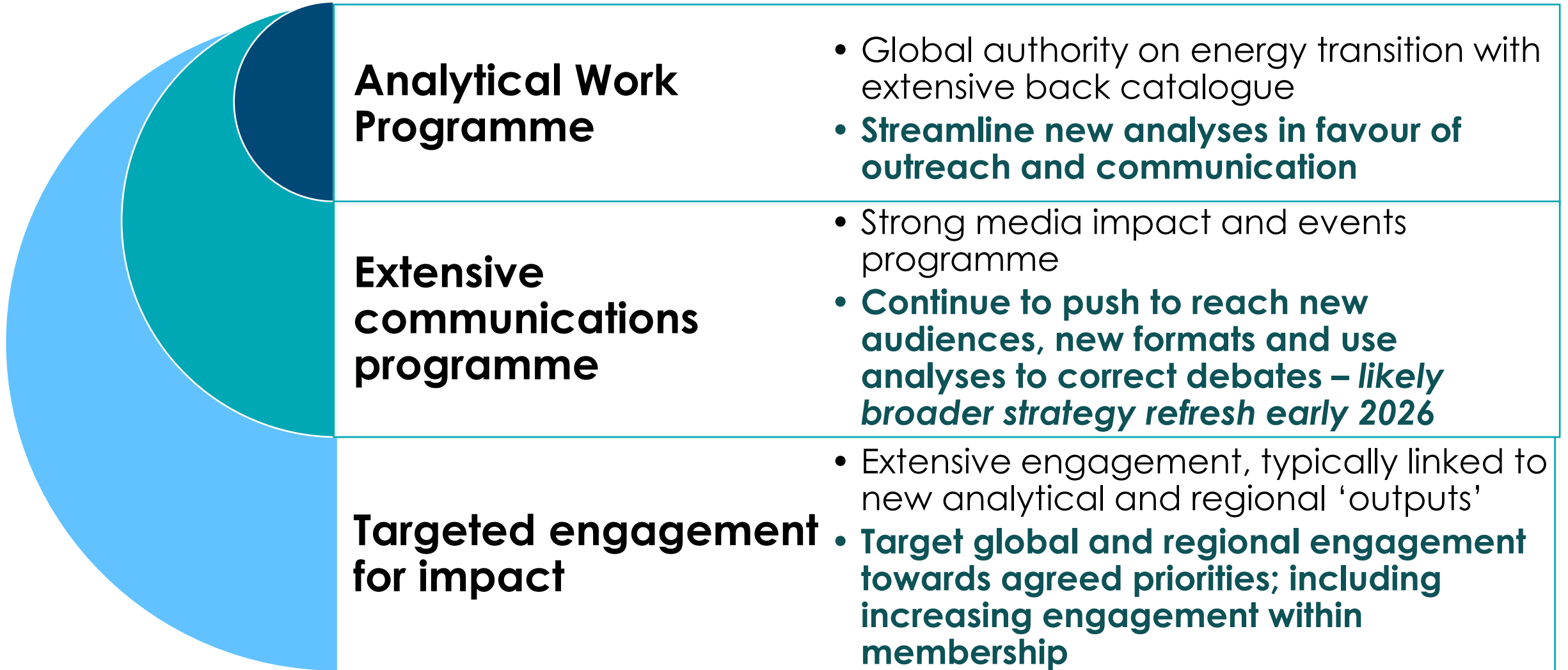
**Transforming members'
outlook and knowledge is
leading to new strategies**



The ETC's impact model will evolve in 2026

XYZ = Existing

XYZ = New Considerations



Proposal for evolution: more agile analysis & increased engagement

ETC in 2025 – 12 analytical outputs:

3 major reports (100 page +):
Buildings, power, molecules

3 insights briefings (c. 50 pages):
long distance transmission, energy productivity, road transport

5 briefing notes/blogs (5-20 pages):
Trade, carbon credits, IGTs, demand-side flex, energy productivity

10x Regional partnerships + 1x regional insight
India (AgriPV)



ETC in 2026 ~ 6-11 analytical outputs?

1 major report:
Credible climate reset + economics of transition

~4 insights briefings (c. 50 pages):
e.g. nuclear/geothermal, hydrogen, consumer prices, bioenergy

? ~5 briefing notes/blogs/2-pagers for strategic Qs:
e.g. role of gas, wind complementarity, Sunbelt opp, jobs...



Additional member engagement



Space for increased global and regional engagement

CONTINUING TO EVOLVE AND REFINE OUR THREE PILLAR COMMUNICATIONS STRATEGY

Disseminating ETC insights & recommendations







Leveraging existing knowledge



Informing the influencers



Proposal for evolution: Refining external and member engagement

Work area + selected 2025 engagements	ETC in 2025	ETC in 2026
 <p>Analytical programme (6 workshops, 5 webinars)</p>	<ul style="list-style-type: none"> • Set analytical programme based on key questions in the energy transition space, steered by members • Provides stock take (e.g. state of transition) and global/high level system insights 	<ul style="list-style-type: none"> • Shorter form, and lower volume across more diverse array of formats (incl. consider pptx rather than reports) • Continued strong input from members
 <p>Communications programme (7 report launches + extensive outreach)</p>	<ul style="list-style-type: none"> • Briefings ahead of report releases • Traditional media/press engagement – economist, FT, events 	<ul style="list-style-type: none"> • Shorter form media engagement • Continue to reach out to new networks of influencers, targeted groups, new audiences • Likely strategy refresh in early 2026
 <p>Global and Regional Engagement programme (7 regional trips)</p>	<ul style="list-style-type: none"> • Global and regional engagement to influence policy related to insights from new ETC work • Active regional network across 10 countries/regions 	<ul style="list-style-type: none"> • Stronger targeted engagement with key actors, in key regions towards agree priorities
 <p>Member Engagement (6 member meetings in 2025, + workshops, webinars, comms clubs and bilaterals)</p>	<ul style="list-style-type: none"> • Personal engagement from Adair (and Ita/Mike) with c-suite • European centric with selected trips to engage with global members 	<ul style="list-style-type: none"> • Systematic 1 on 1 engagement with Adair/Jules and one member of leadership; also offer analytical team presentations to member teams • Additional member support in recruitment • Prioritisation within suite of ETC activities (meetings, webinars, comms club)



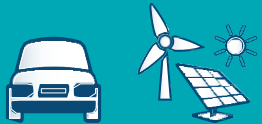
Potential additional ETC members for 2026

Non-exhaustive

Core themes



**Emissions
& economics**



**Clean
electrification**



Molecules

Key targets



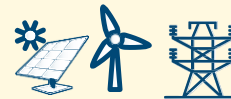
**Hyperscalers &
infra providers**

Google (+
DeepMind,
Tapestry);
Microsoft, Meta,
Open, Prometheus
...



Ambitious finance

Santander; JPM; Barclays, Deutsche;
UBS; Allianz



Utilities

Masdar, TAQA, RWE, Edison, NextEra, Enel,
Orsted, Statkraft, ACWA, E.ON, Atlas, PG&E, PLN



Chemicals players

BASF; Air Liquide; ADM;
Cosan



Heavy industry

POSCO; Cemex;



**Equipment
providers**

Siemens
Energy; GE
Vernova; ABB;
Hitachi; Vestas;



ETC's 2024/25 comms priorities extended ETC reach and impact

Pillar 1: Disseminating ETC reports

To expand the evidence-base: helping to win ongoing debates

- **Broadening ETC presence, focusing on:**
 - Tier 1 media and non-English international media.
 - Social media
 - Key sectoral and regional events.
- **Direct engagements** through:
 - Targeted outreach campaigns
 - ETC Matters newsletter

Pillar 2: Repackaging existing insights

To inform and explain: dispelling myths, correcting misinformation, and explaining and re-explaining complex ideas

- **Through shorter, more digestible forms. E.g.,**
 - Op-eds and articles
 - Speaking at events
 - Videos
 - Blogs
 - Infographics
 - Short explainers

Pillar 3: Informing influencers and reaching new audiences

To educate and convince: audiences previously unaware or unconvinced

- **Through audience specific tailored content. E.g**
 - Podcasts / Digital story-telling / Social media
- Collaboration with **analytical/comms partners** (e.g, Mission Efficiency, GCEN, GO, GSCC).
- **Direct outreach** with high impact groups (youth groups, regional climate/energy advocacy groups, etc.)

ETC are planning broader refresh of the comms strategy to discuss with members early 2026, including engagement strategy

2026 global impact & engagement priorities – for discussion

Core themes

Emissions & economics



Objectives

Defend ambitious climate action by promoting strong action, including actions to ensure delivery of credible but stretching climate targets

Example impact targets

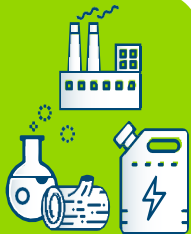
- Influence UN NDC process (COP31), and corporate targets
- Defend carbon pricing/CBAM
- Challenge anti-transition narratives (incl. misinformation)
- Challenge role of fossil in power sector – particularly in ‘Sunbelt’
- Promote faster infrastructure buildout, incl. flexibility in grids and demand
- Defend essential role of H₂
- Promote carbon circularity, including vital but limited role of CCS
- Shift key geography towards sustainable bioenergy transition

Clean electrification



Promote acceleration of clean electrification, including clarity on role of gas, advancing flexibility in grids/demand-side and highlighting ‘sunbelt’ opportunity

Molecules



Provide clarity on role of molecules, accelerating scale up of clean and circular options

Once agreed, ETC team will come back with specific impact measures in comms strategy refresh (e.g. key events, conversations, regions & partners)



Proposed 2026 work programme builds on previous, shifting towards shorter insights & targeting selected new big issues

Key

○ Major report
○ Repackaging
○ Briefing note/blog

↑ Length

Core themes

Selected

Back catalogue

2025

2026

Emissions & economics

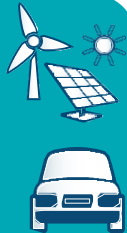


- NDCs (2024)
- **Financing the transition** (2023)
- **Carbon removals** (2022)

- Global trade
- *Carbon credits*
 - Energy productivity
 - Road transport
 - **Zero-carbon buildings**

- **Positive climate target resets**
 - Supported by: Economics of transition: costs to economy and consumers
 - *Jobs + employment impacts*

Clean electrification



- Offshore wind (2024)
- Building Grids (2024)
- **Materials** (2023)
- Supply chains (2023)
- Planning + permitting (2023)

- **Power Systems Transformation**
- Long-distance transmission
- *Demand-side flexibility*

- Role of firm low-carbon power: nuclear, geothermal
- Market design for lower bills
- *Targeted issues: Sunbelt opportunity, Role of gas, wind*

Molecules



- **Fossil fuels in transition** (2023)
- **Clean hydrogen** (2021)
- **Sustainable bio** (2021)

Carbon in an electrified future

- Hydrogen: re-assessing the fundamentals, 4 years on
- Bioenergy: transition vs. reality



Cross-cutting state of the transition campaign

Using the ETC's existing global & regional connections and initiatives to target policymakers and business in all key regions

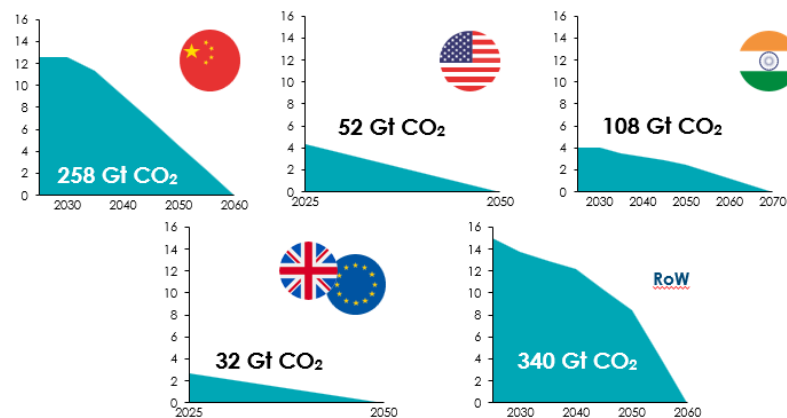


Analytical priorities? Credible reset of global and country targets

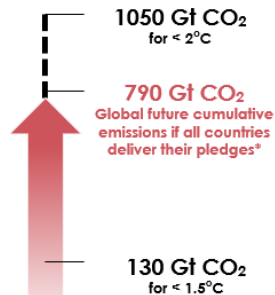
Cumulative emissions to 2050 likely to surpass 1.5°C budget...

Existing pledges are not compatible with a 1.5°C limit, but if fully met they could keep temperature rise “well below 2°C”

Cumulative CO₂ emissions*, 2025-2070
GtCO₂



Remaining carbon budget in 2025 for a 50% likelihood



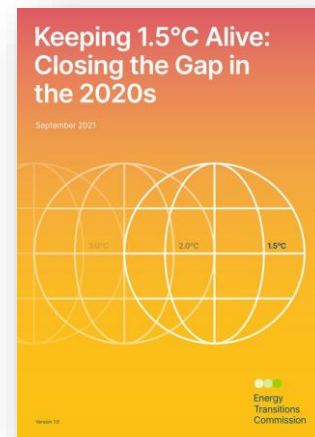
Note: * Accessed against the carbon budget in June of 2025, to which an equivalent of 19 GtCO₂ estimated emissions was subtracted from the total to account for emissions between January 2024 and June 2025.
Source: IEA (2025) World Energy Review; IEA (2024) World Energy Outlook; Climate Change Tracker available at: <https://climatechangenettracker.org/climate-change-progress/current-remaining-carbon-budget-and-trajectory-fill-exhaustion> [Accessed October 2025]

...indicating a need for a constructive dialogue on temperature targets

- **1.5°C threshold already reached.** Remaining carbon budget for 1.5°C now < 200 Gt; ~1000 Gt for 2°C
- **Emissions growth slowing** (0.8% in 2024) **but not yet falling** – annual rate still ~40 GtCO₂/year
- **Visions of ~50% emissions reductions put forward** – including by ETC – at COPs 26 and 28 **now not realistic**

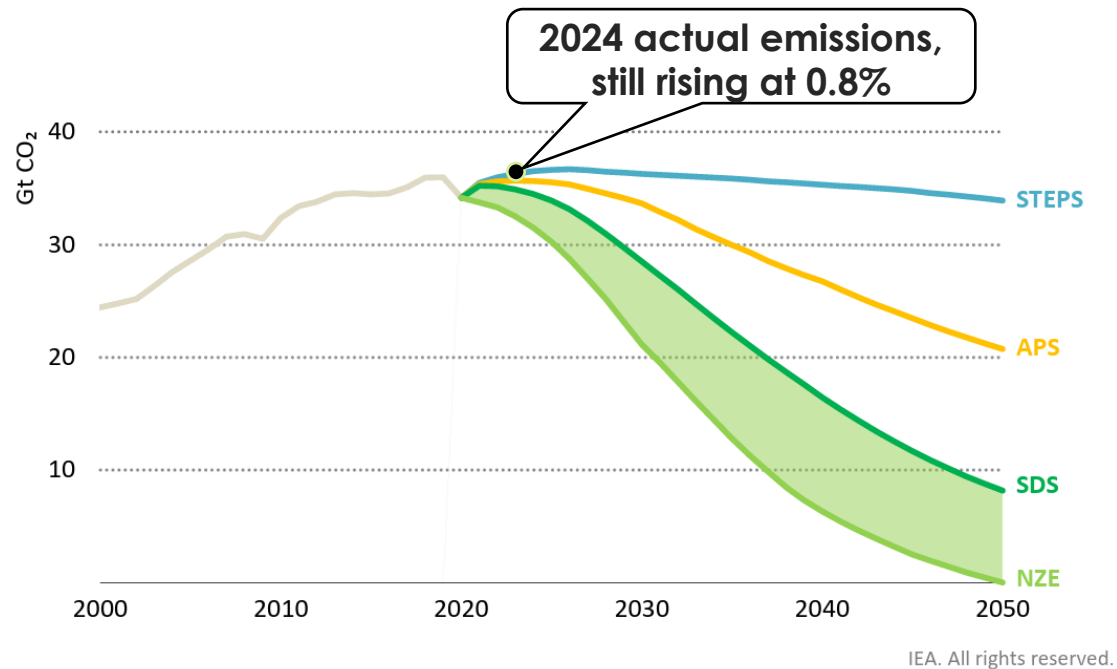
Key questions

Should global ambition move towards 1.75°C?
Focus on cumulative country-level carbon budgets important?



Analytical priorities? Credible reset of corporate and financial institutions targets + implications for financing fossil fuels

Emissions pathways from the IEA (2021)...



...underpinned targets and commitments that are challenging to implement

- **GFANZ** (Glasgow Financial Alliance for Net Zero), **NZBA** (Net Zero Banking Alliance) and **NZAMI** (Net Zero Asset Managers Initiative) all losing members
- **Oil and gas companies revising transition targets**
- **Challenges** with implementing strict 1.5°C pathways **now recognised by SBTi, with implications for corporates**
- **IEA now producing new, higher emission, pathway: “Current Policies Scenario”**

Key questions

- How to credibly ‘reset’ a climate target whilst still maintaining high ambition?
- Fossil fuel company ambitions and the role of finance in a fossil phasedown?



The Economics of the Energy Transition will assess mitigation costs and distributional effects to countries and consumers

Analytical

Economics of the Transition



Costs in the end state

- Update of ETC 2021 estimates of costs to consumers as % GDP once transition complete
- By sector/application (e.g. “green premiums” and with more detailed analysis of food and agriculture)



Costs in transition

- Update of ETC 2023 analysis of investment requirements
- Early-stage subsidy costs and resulting legacy contracts with lessons learnt for RoW
- Costs of accelerated closure of existing capital assets - e.g. coal power plants
- Implications for consumer costs of slower/faster emissions reduction



Distributional issues between and within countries (example based)

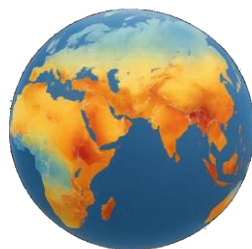
- Higher costs vs. lower cost renewable resources
- Cost of capital differences by country - e.g for African solar development
- Cost of capital differences by household - e.g for low-income household heat pump investment



Analytical priorities? Sunbelt opportunities

Accelerated clean power deployment

- Falling costs of solar + batteries unlocking opportunity in the 'sunbelt' – emphasised in ETC power systems report
- Rising solar panel imports to key regions (African nations, Pakistan) at higher pace than predicted



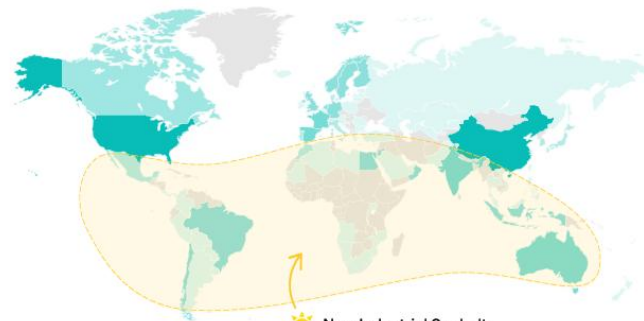
Combine insights with ISA, to opportunity to accelerate increased electrification?

Clean industrialisation

- MPP review of heavy industry projects highlights potential for 'New Industrial Sunbelt'
- ETC work shows low-cost power potential

Clean industrial transformation is happening in ~70 countries around the world
 Announced projects per country, 30th April 2025

<10 >90



New Industrial Sunbelt

Countries with an abundance of natural resource to produce renewable energy, competitive labour markets and good fundamentals to deliver plentiful clean hydrogen at lower costs. A fifth of all clean industry investments to date have flowed into new industrial sunbelt countries.



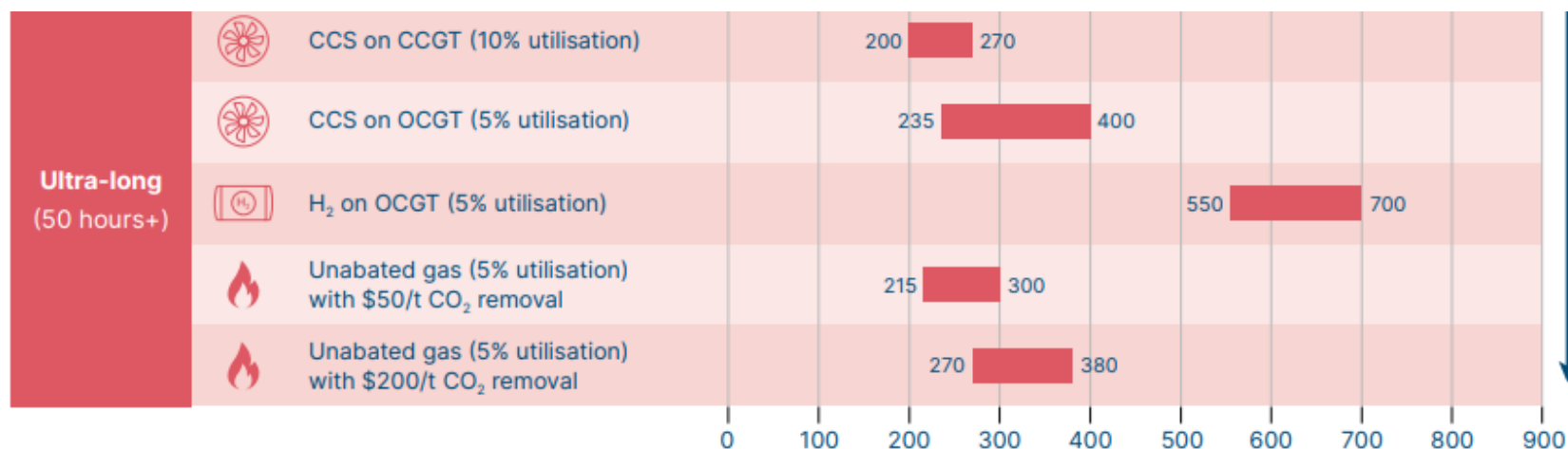
Combine insights with MPP, to understand blueprints for clean industrialisation?



Analytical priorities? Role of gas

Role of gas in the power system

- Long term role of gas in a low-carbon world & regional differences – focus on “ultra-long balancing”
- Short term perspective, what is driving gas demand today – including role of data centres



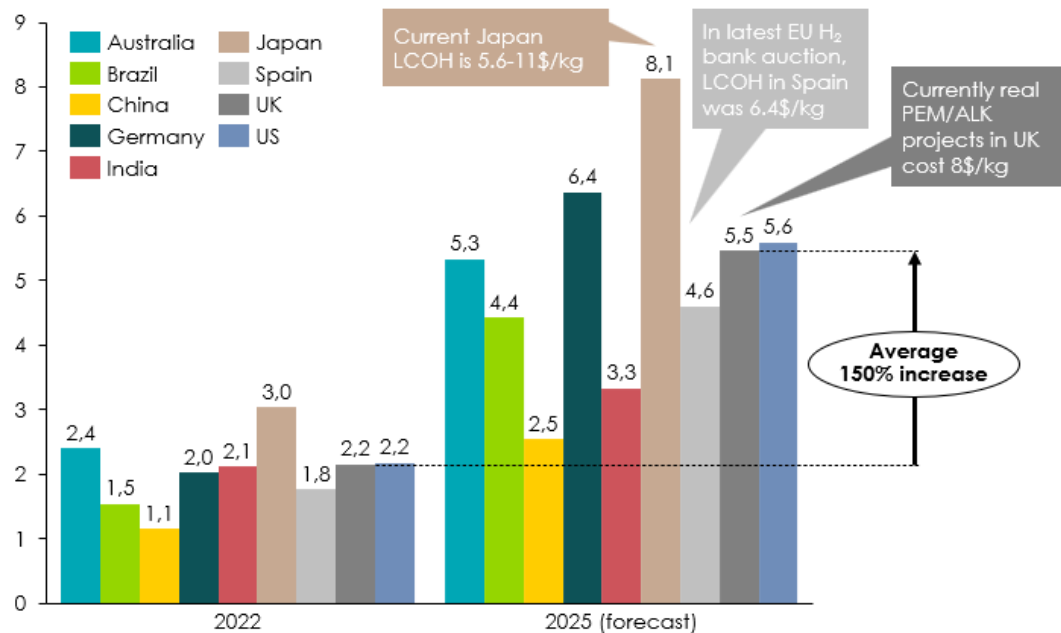
Address the narrative around the role of gas in a transitioning energy system



Analytical priorities? Hydrogen review

Hydrogen: re-assessing the fundamentals, 4 years since the 2021 report

Levelised cost of Hydrogen from renewable electricity BNEF revised projections for 2030
\$/kg H₂



- Cost of electrolyzers not falling as anticipated
- Lack of firm demand lead to questions on long-term role of hydrogen
- High input energy costs
- *But 300+ Mt will still be required in Net Zero world*

Need to understand reasons behind lack of progress, and reaffirm view on long-term role?

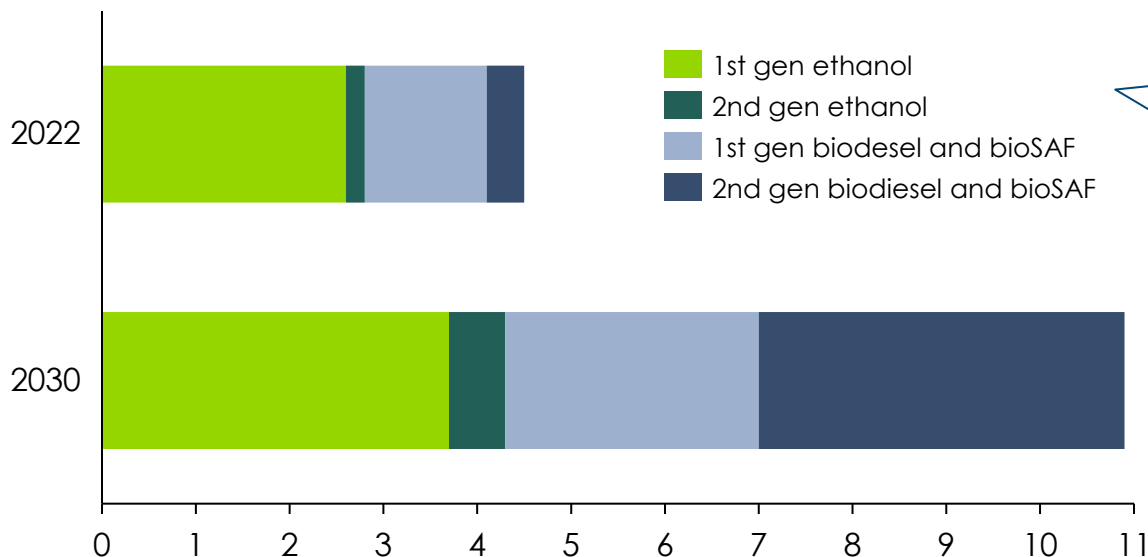


Molecules priorities? – bioenergy transition

Role of bioenergy: transition to 2nd generation fuels

Liquid biofuel production by feedstock and technology in 2022 and IEA net-zero 2030 target (EJ)

>90% of biofuels come from 1st generation feedstocks



Importance of key regions

- Biogas projected to supply 12–20% of bioenergy by 2040, mainly present in Europe and China.
- Brazil produces 25% of global bioethanol output
- Southeast Asia's biomass potential is estimated at ~7 EJ/y by 2050 (IRENA 2022).

We need to:

- Ensure non-competitiveness with food production
- Ensure bioenergy is used primarily for aviation, despite the high cost premium of bio-SAF.

Key questions

Can bio-rich countries shift from road fuel to higher grade bio production?
 How can existing refining and fuel infrastructure be repurposed to accelerate bioenergy scale-up?



Analytical priorities : 5 things we don't propose to tackle

- **Additional work on growth of AI energy demand** (other than connection to role of gas)
- **'Future of wind': prospects for repowering, floating offshore wind**
- **Geoengineering**
- **Power: Negative pricing/cannibalisation dynamics and considerations for market design**
- **Energy system resilience**



Mapping these across regional network shows X major activities for 2026

Regional



The Transition Accelerator
IVEY foundation

Canada within the global context



Duke NICHOLAS INSTITUTE for ENERGY, ENVIRONMENT & SUSTAINABILITY



SYSTEMIQ

Leverage Carbon Molecules report



SYSTEMIQ

European Climate Foundation
Corporate Leaders Group Europe



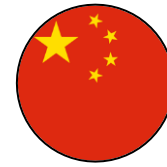
WORLD RESOURCES INSTITUTE
isa INTERNATIONAL SOLAR ALLIANCE

Energy access + system growth



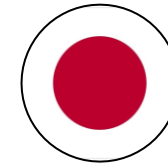
teri
CEEW THE COUNCIL
RMI

AgriPV: Phases 1 and 2



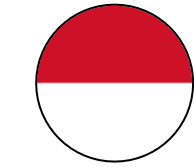
ENERGY FOUNDATION 能源基金会
清华大学 Tsinghua University
RMI

Green steel, building on MPP/RMI



IF
東京大学未来ビジョン研究センター
Institute for Future Initiatives
The University of Tokyo

SEA Regional Meetings



SYSTEMIQ
IESR
Institute for Essential Services Reform

Economy-wide case for energy transition



Climateworks CENTRE
MISSION POSSIBLE PARTNERSHIP

Electrification + grids, double-triple

+ Comprehensive state of the transition campaign

Using the ETC's existing global & regional connections and initiatives to target policymakers and business in all key regions





Priorities for action in the EU

Feed work into policy recommendations from partners and publicly support their advocacy

- Defence of robust **CBAM**
- Target **90% emissions reduction** by 2040
- Deploy **cleantech** + increase **electrification**

EU Policy Whitepaper
December 2024

Solidifying the EU's leadership in the global energy transition

Introduction

The Energy Transitions Commission (ETC) is an independent, non-governmental organization that provides policy advice to governments, businesses, and investors on the energy transition. Its mission is to ensure that the transition is just, secure, and sustainable, and that it delivers the economic, social, and environmental benefits that are needed to meet the world's energy needs in a sustainable way.

Global trade in the energy transition: Principles for clean energy supply chains & carbon pricing

June 2025 | Version 1.0

Energy Transitions Commission

Briefing Note

CLG Europe

130+ businesses and investors call for an effective Clean Industrial Deal

#investinEUstrengths

Expand power systems insights to regions and member states within the EU

- Accelerate **flexibility in power systems** across western Europe (see next slide)
- **Decarbonize the grid while scaling electrification** in eastern Europe

Briefing Note
JANUARY 2025

Energy Transitions Commission

Demand side flexibility - unleashing untapped potential for clean power

In February 2025, countries must submit new "nationally determined contributions" or NDCs, setting new, more ambitious emissions reduction targets for 2035. In our recent publication, *Carbon Contributions: A Guide to the Global Climate Goals*, the ETC highlights the current NDCs for 2030 and the world on track for 2.1-2.2°C of warming by 2100 - far from the Paris agreement's goal of well below 2°C, or the higher ambition of 1.5°C. More ambitious targets are urgently needed, with stronger links to national policies.

As countries gear up to update NDCs in February, the spotlight is firmly on how to accelerate the transition to clean electrification: under net-zero scenarios, the global economy must decarbonize. In COP29, a Global Energy Storage and Grids Pledge was signed by 58 countries, including Brazil, the United States and United Kingdom. The Pledge builds on COP28's pledge to triple renewables by 2030, signaling political commitment to accelerate system-level enablers required for rapid renewable deployment. It centers on increasing global energy storage capacity six times above 2022 levels, reaching 1,500 GW by 2030 and to add or refurbish 25 million km of grids as set out by the International Energy Agency (IEA).¹

While action on storage and grids (including long-distance transmission) is vital, another pillar of action - demand side flexibility - will also be critical to deliver clean, expanded power systems. Traditionally, power systems operated on building generation to meet demand. In future power systems - based on variable generation from wind and solar, and with a more dispersed network of electricity end-users - demand is now positioned to play a much bigger role in actively responding to system needs.

Demand side flexibility means being able to shift the consumption of electricity at peak times - such as through "smart charging" of electric vehicles (EV), time-shifting usage of other electric devices, or using distributed storage. Critically, this flexibility can help to offset new grid and generation capacity needed across the system, reducing costs and speeding up the transition. Overall, demand side flexibility can play a significant role in buildings, industry, and the transport sectors. ETC analysis at the global level suggests that a third of total electricity demand in 2050 could be flexible - roughly equivalent to today's entire electricity consumption.

A third of total electricity demand in 2050 could be flexible - roughly equivalent to today's entire electricity consumption.

¹ IEA (2024), *Global Energy Systems: Charting the Transformation of Global Energy*.
² Global Renewable Alliance (2024), *COP29 Global Energy Storage and Grids Pledge*, available at <https://www.globalrenewablealliance.org/en/global-renewable-alliance-cop29-global-energy-storage-and-grids-pledge/>.
³ See ETC (2024), *Building Global Energy: The Role of the Global Grid*.
⁴ IEA (2024), *Power: Taking Stock in Taking Action: How to Implement the COP29 Energy Plan*.

Energy Transitions Commission

ETC Briefing - Power Systems Transformation

Innovative Grid Technologies: a fast-track to cheaper, resilient grids

October 2025

Around the world, grids will need to grow and modernise. As the world electrifies, both rapidly growing electricity demand, as well as rising wind and solar generation, will require large scale investment in both transmission and distribution grids. **Innovative Grid Technologies (IGTs)** can offer a vital solution for optimising grid build. IGTs, which can be either software solutions (such as dynamic line rating) or hardware solutions (such as advanced conductors), optimise use of existing infrastructure by maximising the network capacity and reducing losses, lowering investment needs, speeding connection queues, and accelerating renewable integration. To scale, they require coordinated action across the value chain to reform regulation, sign incentives, and ease supply chain bottlenecks.

1. The world needs to massively expand and invest in grids

Upgrading global grids is one of the defining challenges of the energy transition. Overall, the Energy Transitions Commission estimates that the total global grid length must grow by around 2 times from today to 2050, growing from around 82 million km of grid in 2025 to around 150 million km in 2050, with growth across all regions. To put this in perspective, 150 million km is around 1.4x the distance from the Earth to the sun. The challenge is fundamentally different around the world. In countries such as India, this simply represents a continuation of the pace of grid build-out seen in the last decade. In Western Europe and the US, the increase will be a step change after a period of relatively slow investment.

These expansion needs are matched by a similar order of needs of investment. Total global investment in grids needs to grow from around \$370 billion in 2024 to ~\$900 billion per annum in the 2030s and 2040s. About 55% of the total is required in the distribution network and 45% in transmission. This is not just about adding more copper wires - it involves replacing aging grid assets and modernising grid infrastructure and capabilities, such as enabling two-way flows.

2. IGTs can reduce grid investments by up to 35%

IGTs are both software and hardware solutions that can optimise the use of existing grid infrastructure by maximising network capacity and reducing losses. Commercially ready IGTs include hardware solutions such as advanced conductors, voltage upgrades, and "string as transmission assets" which can boost network capacity by 40% to over 400%. On the software side, technologies like flexible AC transmission systems, dynamic line rating (DLR), self-optimisation, dynamic voltage control and grid inertia and flexibility measurements can increase network capacity by around 20% through real-time visibility and response.¹ Advances in artificial intelligence are now making these tools more powerful, enabling automation, precision and integration into grid operations. Emerging applications include self-healing grid systems that automatically detect and isolate faults.²

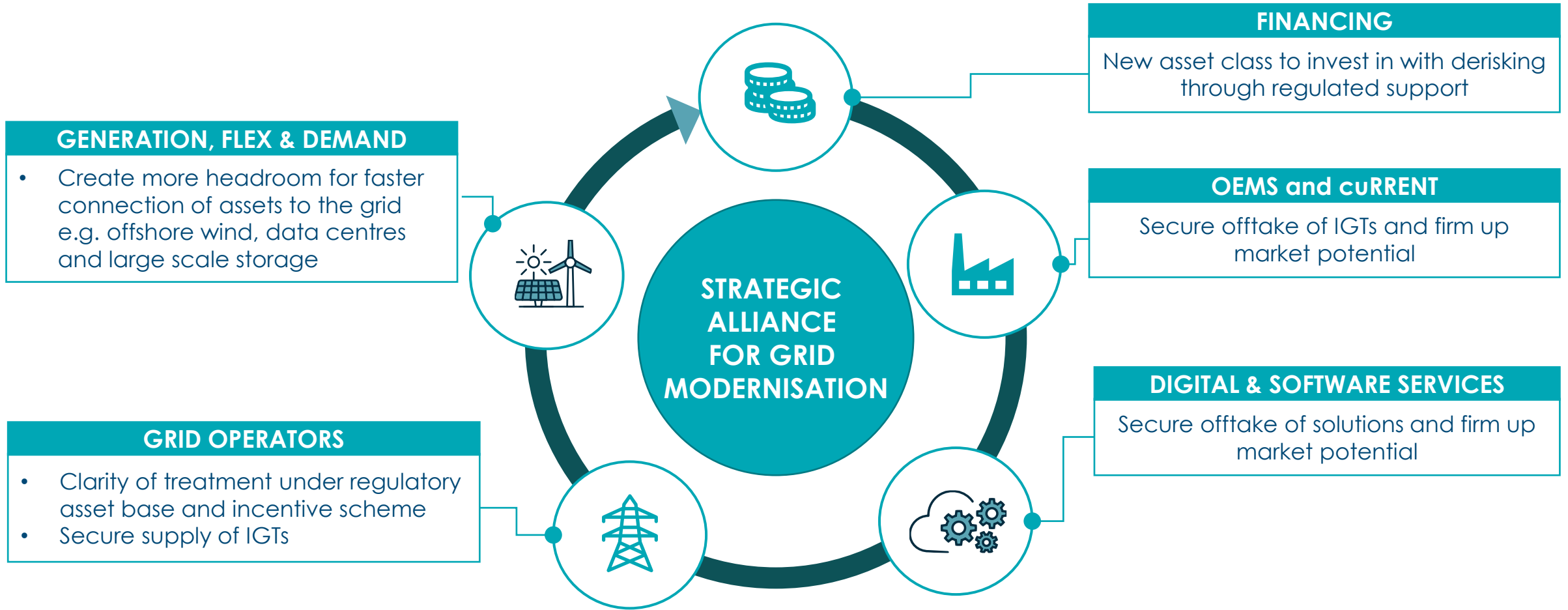
¹ IEA (2025), *Electricity Grids and Secure Energy Transitions*, BR47 (2024), NDC 046.
² IEA (2025), *Electricity Grids and Secure Energy Transitions*, BR47 (2024), NDC 046.
³ IEA (2025), *Artificial Intelligence in Energy: Resilient Grid Systems*, Technology, systems, hardware, challenges and research directions.

Energy Transitions Commission



Translating ETC work into action: accelerating the deployment of IGT across western Europe with Systemiq

Regional



Regulators to be kept informed and aligned with – but cannot be part of the coalition





Next steps: Strategic value chain coalition in Europe to push for reform?

COALITION'S 4 GUIDING PRINCIPLES

1

We have a **shared vision of IGTs as a key enabler** of the energy transition and a **necessary growth market**

2

We seek to **scale up the deployment of IGTs in Europe and the UK** to support net zero plans and the decarbonisation of our economies

3

We will **collaborate on the influencing of regulatory and policy changes to enable the scale up of IGTs** for the net zero grids of tomorrow.

4

We seek to **develop MoUs** for IGT value chain offtake agreements

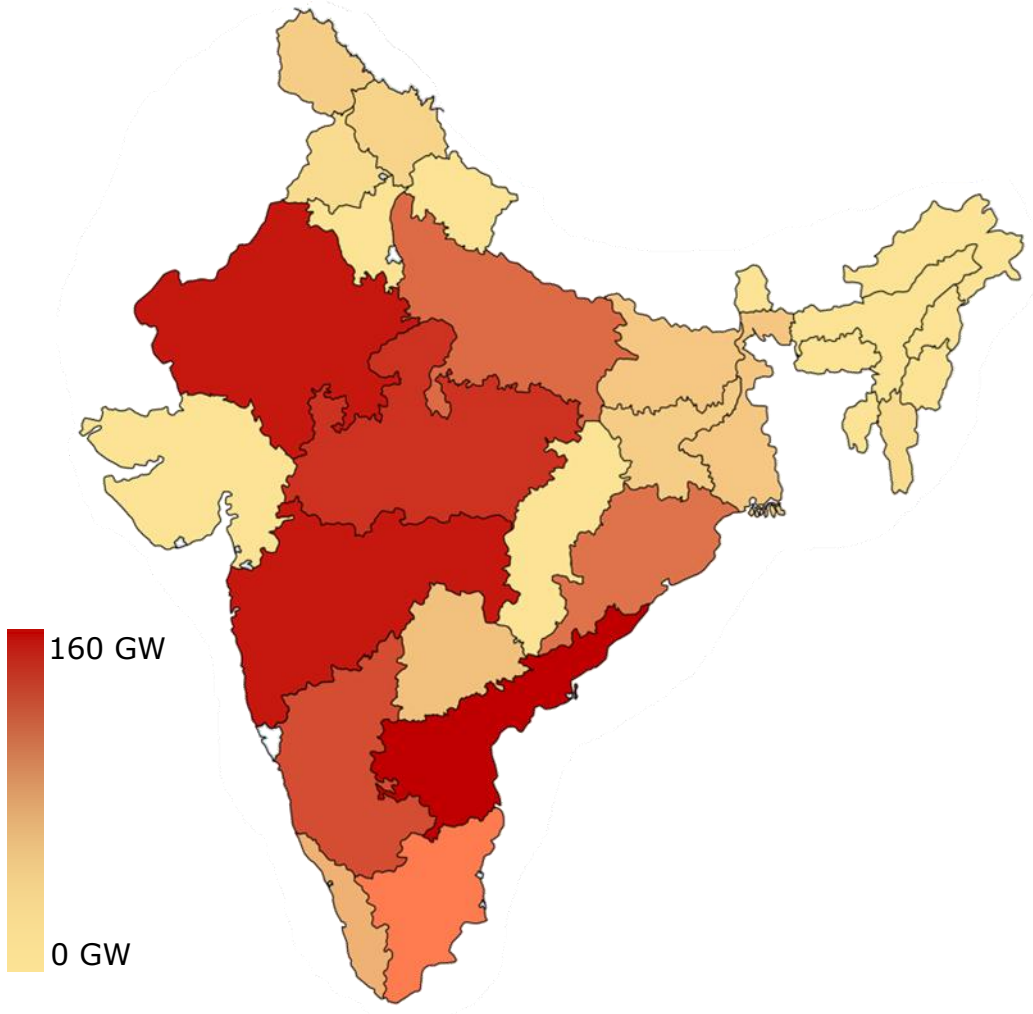




India: preliminary estimates 1.2-2.1 TW of potential AgriPV capacity insights to be refined with next steps

Regional

AgriPV potential capacity by state, GW



Primary data collection from visits to existing pilot sites



Standalone brief addressing land-availability for solar PV



Analysis of AgriPV impact on local distribution network



Policy recommendations to unlock AgriPV deployment



Indonesia: New work to engage broader audience around transition

Regional



Bayshore Global Management



Leveraging past IESR analysis, new work anchored in two pillars:

1. **Build the demand-side case for clean power** through engagement with Indonesia's industry leaders
2. **Reframe the transition as a driver of national development and economic growth**, not just an energy or climate agenda



Questions for discussion

- Do you agree on the proposed shift towards engagement?
- Are analytical priorities right for 2026?
- Are engagement priorities, including in ETC regions, the right ones? How best to report impact to members?