Energy
Transitions
Commission

ETC 2025 Work Programme

ETC Commissioners Meeting

31st October 2024

ETC impact
2024 Highlights

ETC 2024 work programme

Extending our influence in the global climate debate

- Disseminating ETC insights & recommendations
- Leveraging exsisting knowledge
- Informing the influencers

Delivering action through future COPs

- Ambition and format of NDCs
- COP 29, 30, 31

Building the clean energy system faster

	Main reports	Shorts
Power system transformation – barriers to clean electrification	Grids	Offshore wind
	Energy storage & flexibility	Power demand growth
Energy productivity	Buildings decarbonisation	Road transport
		HTA sectors (MPP)
	Energy Productivity across the economy	

Building the ETC regional network

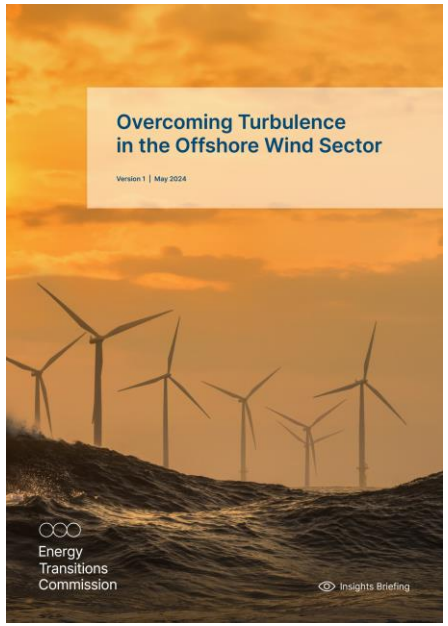
Supporting the MPP

MISSION POSSIBLE PARTNERSHIP

Supporting the ETC members

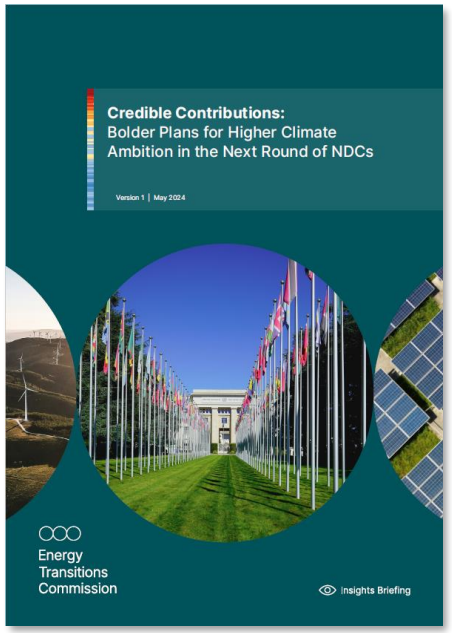
2024 ETC Reports

April



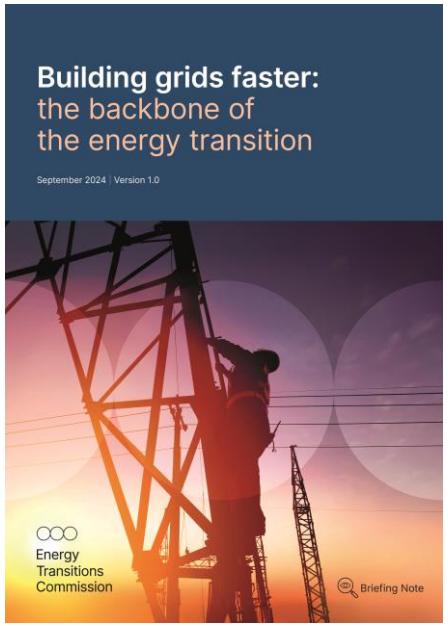
ETC called for governments and the offshore wind industry to restore confidence in the market, drive down costs and accelerate the energy transition.

June



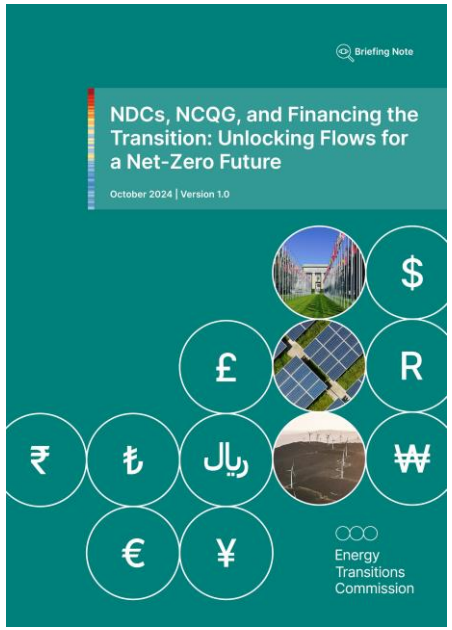
ETC called for industry and government collaboration to raise ambition of the next round of NDCs by COP30.

September



ETC called for policymakers and industry to fast-track the grid build now and deliver the energy transition at the pace required.

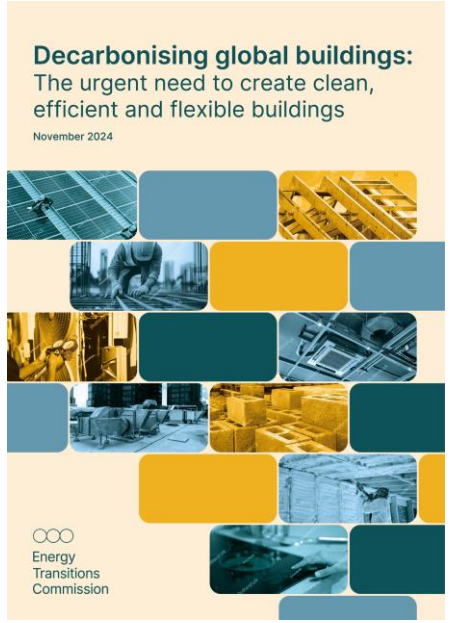
October



ETC proposed four principles to ensure a useful conclusion of the NCQG debate along with the role that NDCs must play in unleashing financial flows.

Topic emerged from Commission meetings this year and produced as part of ETC's repackaging insights work.

December



ETC will analyse pathways to decarbonisation of the global buildings sector to reach net-zero emissions by mid-century.

ETC member engagement highlights in 2024

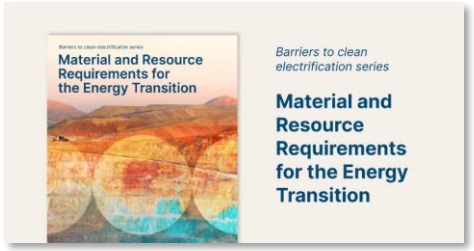
8 Key meetings

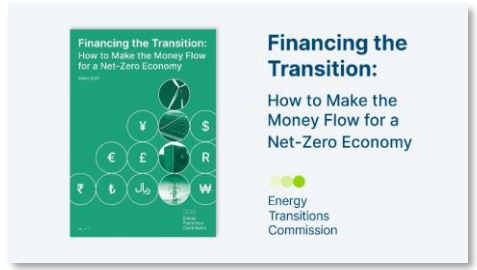
- 1x Commissioners' Meeting
- 3x Representatives' Meetings
- 2x EU strategy meeting
- 2x Comms Club Meetings

13 Expert workshops

- 1x Ambition and format of NDCs
- 7x Buildings decarbonisation
- 1x Grids
- 1x Energy storage & flexibility
- 1x Road transport
- 1x Demand-side flexibility
- 1x Sizing balancing challenge

4 Webinars





- Streamlining planning and permitting
- Securing clean energy technology supply chains

4 Regional trips

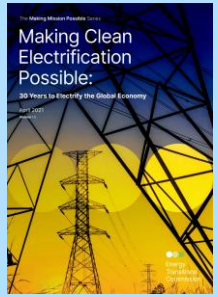
India-Indonesia

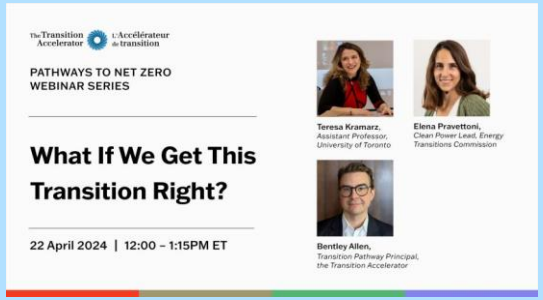
2 X Brazil

Canada

Repackaging and amplifying ETC insights

Beating the drum on Clean Electrification across new regions and audiences



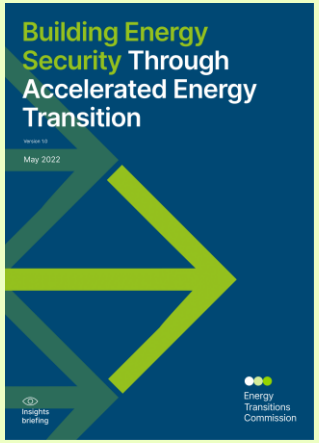


THE GLOBE AND MAIL

'Faster and cheaper than we dared think possible': Why a global leader in the energy transition is still feeling optimistic

How to reach net-zero: Planning & Permitting

Pre-EU election, we prepared EU Energy Security factsheet leveraging existing analysis post-Ukraine



Leveraging our reputation to spur conversation on the scale up of Finance

SustainableViews
Navigating ESG policy and regulation

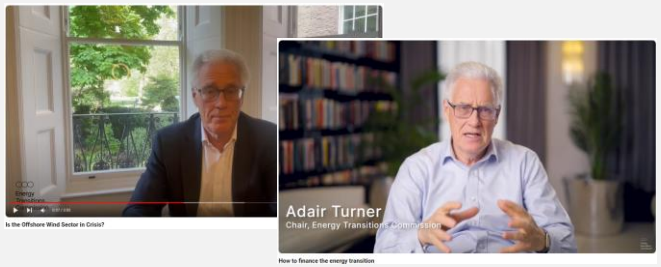
Why cash, not regulation, may hold key to halting deforestation

Climate Investment Summit

Informing the influencers and reaching new audiences

Expanding digital storytelling beyond news programmes, via **explainer series** and developing **talking head videos**

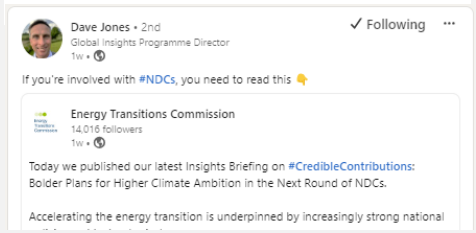
amazon prime video



Leveraging social networks and collaborating with **communications partners**

Climate Action

EMBER
COAL TO CLEAN ENERGY POLICY



GLOBAL OPTIMISM

World Climate Foundation

GLOBAL STRATEGIC COMMUNICATIONS COUNCIL

Broadening our media reach - outside climate & internationally

THE GLOBE AND MAIL

'Faster and cheaper than we dared think possible': Why a global leader in the energy transition is still feeling optimistic

The Telegraph

CHINA DAILY

New Delhi Times

THE TIMES

The night that James Norton told me to turn off the lights

العربية alarabiya

CGTN

CORRIERE DELLA SERA

Expanding our reach to new audiences and interest groups – including via podcasts

sustainability unlocked

6 Carbon Economist Podcast

edie SUSTAINABILITY UNCOVERED

FairCharge The Little Book of EV Myths

Universidad Panamericana

Erasmus University Rotterdam

GIIA Global Infrastructure Investor Association

S&P Global Energy Evolution

Presenting the ETC 2025 work programme

Last year we proposed a two year work-programme

1

Building the clean energy system faster

Analytical programme

2

Building the ETC regional network

Regional programme

3

Extending our influence in the global climate debate

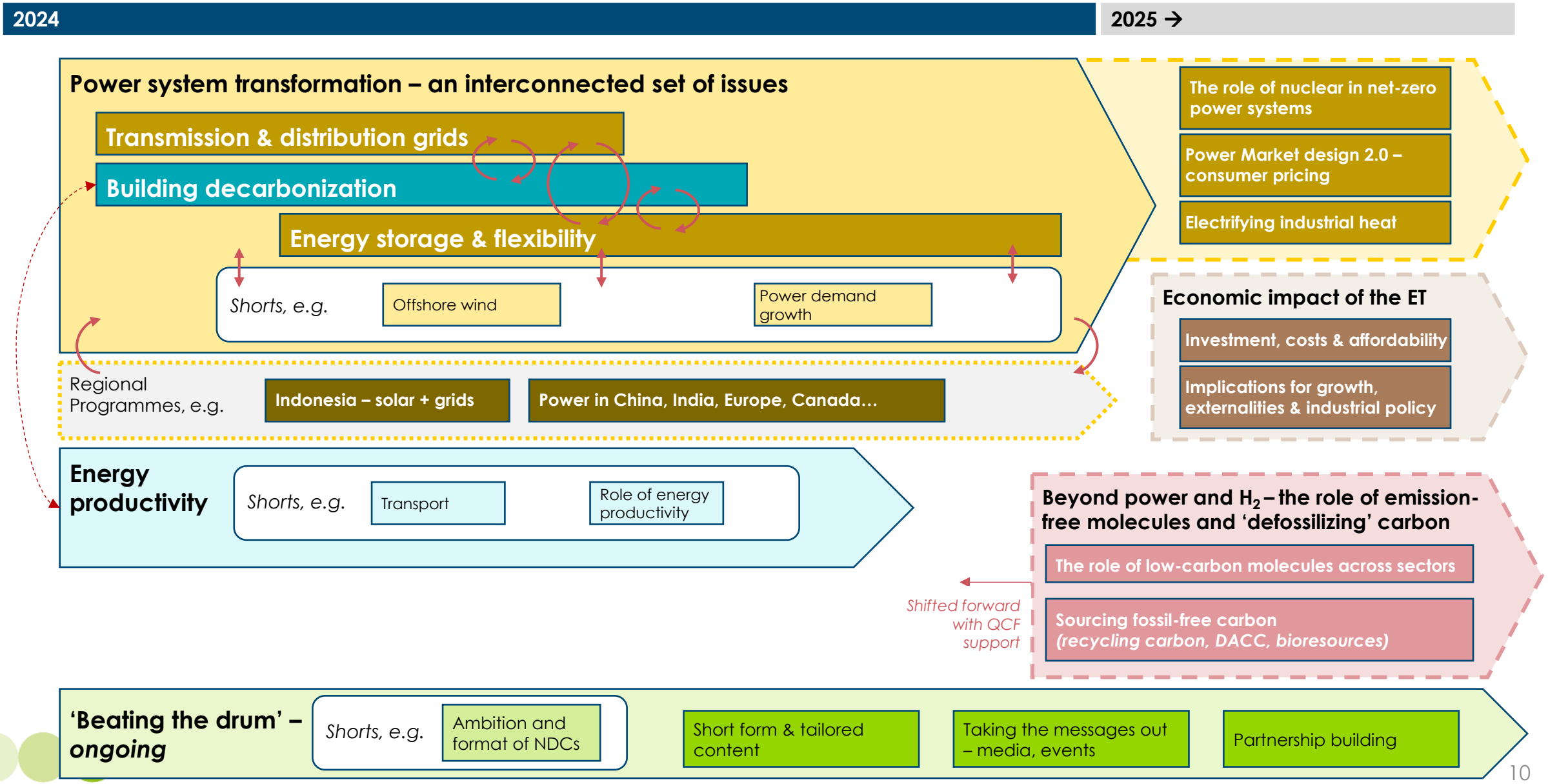
Communications programme

4 **Delivering action through future COPs**

5 **Supporting MPP** MISSION POSSIBLE PARTNERSHIP

6 **Supporting ETC members**

In our 2024 workplan, we outlined the 2-year analytical work plan



We have iterated the work programme, following discussions with Commissioners and Representatives

ETC Commissioners' Meeting, June 2024

ETC Representatives' Meeting, September 2024

We debated three key topics:

- Financing the transition
- Trade in low carbon technologies
- Carbon credits

And received input across multiple new topics:

- White hydrogen
- Geothermal energy
- Power demand as a key focus (incl. AI)
- The importance of social buy-in, & 'who pays',
- Global climate objectives (1.5 vs. 1.7C)
- Cautionary reflections on short term oil and gas growth
- Challenges around global transmission links & global integration of electricity flows

On the 3 additional transition topics

Financing the Transition: Insights for NDCs and NCQGs

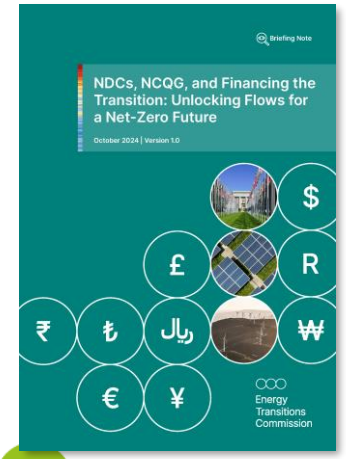
- Key issues discussed: implications of rising real interest rates, the lack of progress on reform of climate development finance, challenges of higher cost of capital and geopolitical tensions, and MDB reforms.

Supply chains: Trade in low carbon technologies

- Key issues included factors risking slowing the transition and impact of trade instruments.
- Importance of assessing the benefits and risks of local supply chain policies was highlighted.
- Agreement on requirement of fact-based principles to guide the debate.

Carbon credits: Scope 1,2,3 in carbon markets

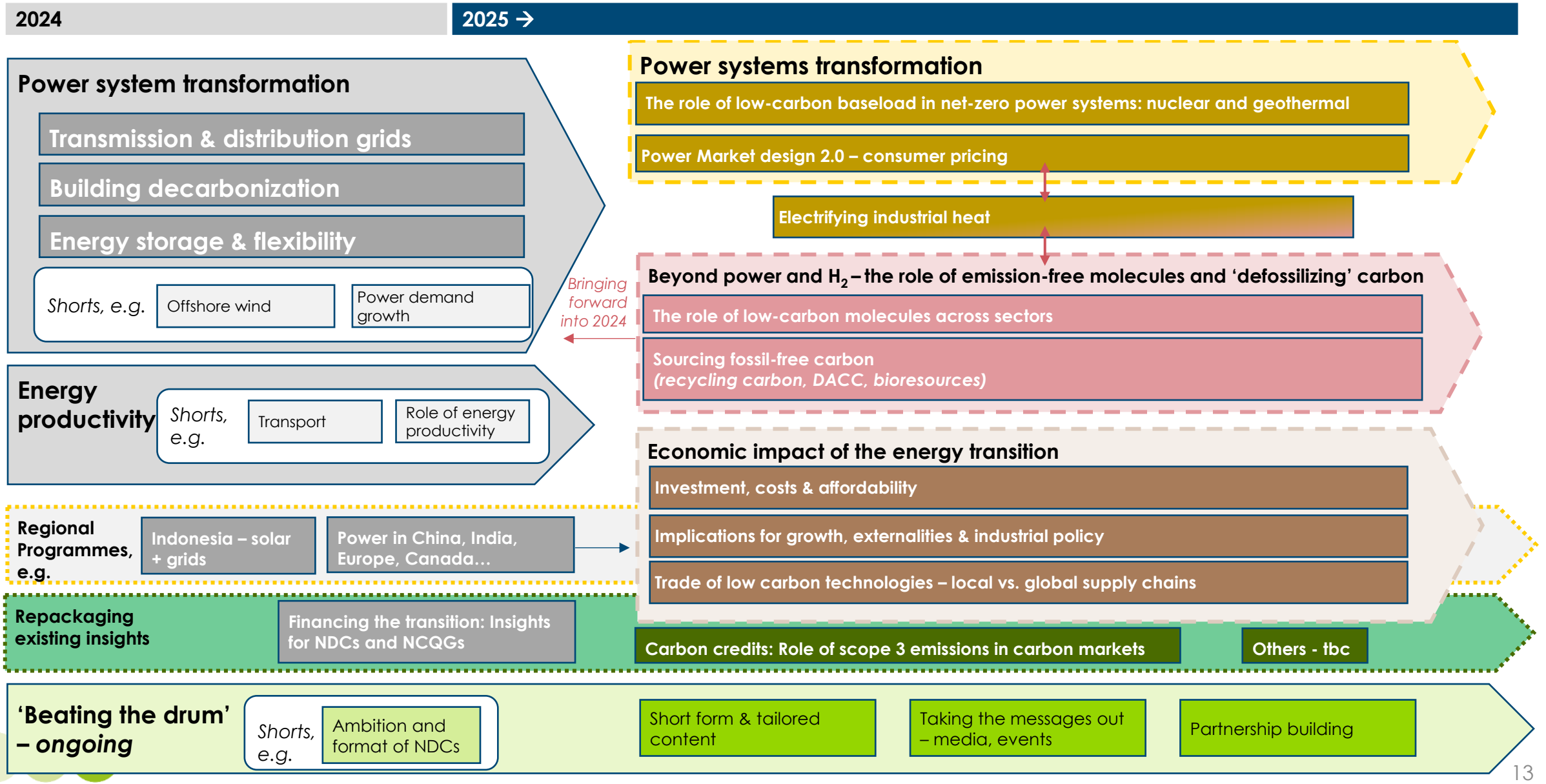
- The evolving debate on corporate carbon credits, building on recent controversy at the SBTi – in particular carbon credits in the context of scope 3 emissions
- Agreement on need for clarity on debate, and opportunity to accelerate corporate action towards key areas (e.g. removals)



Published in October 2024

Integrated in 2025 work programme

Analytical work programme:
2024 – major focus on everything to do with electricity
2025 – 3 areas: carbon molecules, economic impacts & further power



In *Mission Possible* and *Making Mission Possible* we considered the impact of the transition on consumers by sector…

Economic impacts of the transition

Previous ETC analyses have concluded:

Incremental decarbonisation costs will reduce living standards attainable in 2050 by less than 1%. But important **specific distributional effects** need to be recognised:

Residential cooling: negligible incremental cost.

Residential heat: Decarbonising residential heat could have a significant impact on living standards for specific households.

Industrial sectors: Consumer incremental costs will be very small as intermediate products account for a small proportion of the cost of final goods or services.

Road transport: Electric vehicles are or will be lower cost than fossil cars, while road freight costs will be broadly unchanged.

Multiple sectors with negligible impact.

Long-distance aviation: Decarbonising long-distance aviation will require an increase in ticket prices versus business as usual.

Given increasing politicisation of net-zero, focus on the economic impacts of the transition (both costs & benefits) – on individuals, sectors & nations

We propose to conduct an integrated assessment of the impact of the energy transition

Including impacts on economic growth, investment requirements and the implications for consumer living standards. Considering:

- **An assessment of how the impact might vary by countries/regions at different stages of economic growth**
- **How it might vary by different income levels within countries**
- **Engaging effectively in increasingly polarised debates about the economic costs of the energy transition, jobs and the need for a "just transition"**

Current hypotheses:

- **We previously thought an ~80% reduction in emissions might have a ~1% impact on GDP. Now we think 100% might have low - or possibly no – impact.**
- **But that does not mean transition is costless – cost is needed to invest, which likely means less consumption or investment in other sectors of economy.**
- **Net jobs impact likely less than assumed – positive or negative – key issue is specific training and retraining needs.**

Analytical (and regional) programme

Similar debate growing around trade and supply chains, which could ultimately slow the pace or raise the costs of global decarbonization

Economic impacts of the transition

China is technological leader in range of vital clean technologies

- Partially due to subsidies and export pricing strategies
- Mostly due to China's excellent ecosystem of producers / suppliers

In ideal world…

- Technological progress and cost reductions benefit global transition
- Countries able to transition faster and at lower cost

In actuality…

- Geopolitical tensions resulting in tariffs and investment constraints
- Increased costs and slower pace for global transition

Country policies must

- Respond to legitimate desires to develop more diversified global supply chains and domestic employment
- Not undermine the energy transition by rejecting benefits of China's technological leadership and cost efficiency

ETC actions

- Engage with WTO
- Integrate into European Commission White Paper
- Refine supply chain principles discussed with Commissioners
- Integrate into 2025 work programme

Power system transformation – rounding out critical issues & barriers to clean electrification – prioritisation proposed for 2025

1 Role of low-carbon baseload

Role of nuclear

Continues to be an important technology, potentially making up ~c.5-10% of electricity supply in 2050. Analysis to include:

- Latest costs and technology trends (incl. small modular)
- Role of nuclear in a renewable dominated system – including ability to run flexibly
- Embodied carbon, water usage and waste disposal

Role of geothermal

Expected to become more relevant through expanded and novel technology adoption. Assessing:

- Costs of geothermal for power and heat relative to other low carbon technologies.
- Enhanced Geothermal Systems (EGS)as a novel technology
- Geographic opportunities, risks and local environmental impacts

2 Electrifying industrial heat

There is a growing consensus that the 45% of industrial heat demand below 200°C, and potentially higher temperatures can be electrified. Analysis to include:

- Cost and opportunity assessment reflects the falling renewable costs, developments in heat pump and other technologies
- Cost and policy barriers and interventions required to address

Critical link to low carbon molecules work

3 Consumer power market design

A renewable-dominated power system should offer low generation costs to consumers, but other variables matter:

- Assessment of cost impacts today and in future across generation, grid and other costs.
- Assessment of options to adapt power market design, including: move away from gas setting the price for the whole market

Aims of the regional program translate into…

1 Accelerate the local energy transition

- **Produce insights** to set the vision of a Net Zero region, show pathways to decarbonize hard to abate industry sectors, and provide solution set to implementation barriers
- **Influence strategy** via local partners and ambassadors

2 Enhance ETC's global perspectives & credibility

- **Diversify the perspective** of the global ETC vision and key messages
- **Stress test ETC global analyses** to address analytical gaps
- **Create bottom-up vision** of global transition

3 Grow ETC membership

- **Attract new members,** considering both firms with global activities and organizations with business in specific regions

key focus areas for 2025

Expand insights to new, key regions

Enhance networks in existing key regions

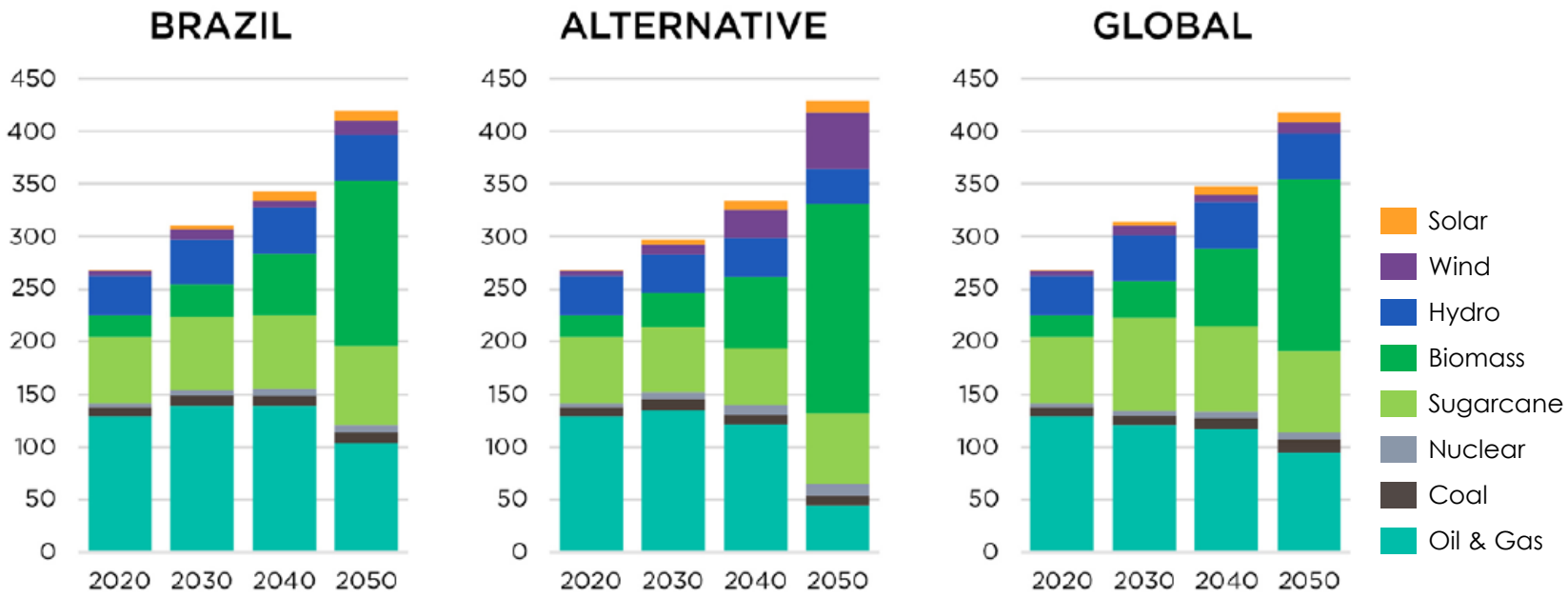
Enhance local priorities in existing regions

Expand insights across all regions

ETI to interrogate bio-centred visions for Brazilian decarbonisation

Net Zero scenarios marked by large uses of biofuels, continued use of fossil fuels, and heavy reliance on Agriculture, Forestry, and Other Land Use (AFOLU)

Brazil's Primary Energy Use, Mtoe



Reflects current NDCs, achieves Net Zero regardless of other countries with carbon budget of 24.3 $GtCO_2$

Alternative technical route with restrictions around water and CCS availability; carbon budget of 24.9 $GtCO_2$

Focuses on Brazil's contribution to global Net Zero, cuts carbon budget by 40% to 15.3 $GtCO_2$

"…**there is no need to implement innovative technologies**… [because] the country has large reforestation potential, which can offset the sector's emissions"

-Deep Decarbonization Pathways, Brazil

- Limited road transportation electrification in all scenarios
- Frequent use of biomass in industry and transport
- Limited consideration of hydrogen – considered a novel technology

Note: passenger road transportation includes urban busses, light commercial vehicles, and 2-/3-wheelers
Source: CEBRI "Carbon Neutrality 2050" (2023); Projeto Decarboost "Uma Estratégia de Descarbonização para uma Economia Brasileira de Zero Carbono Líquido em 2050" (2023)

ETI project to leverage the BLUES IAM model at COPPE, University of Rio de Janeiro

Key assumptions

- **Large cattle herds** will always produce methane, **other sectors must be negative** to compensate
- **Bias toward bioenergy solutions** which may produce negative emissions as a result of:
  - **soil carbon sequestration**
  - **CCS** during process (e.g., biorefining)
- Biofuel production **focus on domestic** transport and industry
- Brazil's **high cost of capital** is permanent, disadvantaging clean tech with high upfront costs

This means, across scenarios, **biofuels dominate**
- **in road transport** and industry
- limited direct electrification and use of hydrogen
- **limited scale up of solar & wind** – despite world leading resources (and hydro 'battery' to meet VRE balancing needs)

Do not see scenarios with:
- **Wind & solar + Direct electrification + "Nature based removals"** (reforestation)
- Major **bio-SAF export** industry in Brazil
- **Role for Green H2** in industry

Critical sensitivities to test

- Achievable levels of **soil carbon sequestration**
  - Total levels & any plateau
  - Durability
- Costs and revenues for **Nature based removals**
- Cheapest **solar and battery** costs
- Full suite of decarbonisation technology options by sector, e.g. H2 for steel
- Power system balancing costs & role of hydro
- Impact of SAF export potential

Indonesia's election offers a new opportunity to engage with the government over the plans for the energy sector

Past efforts looked at the power system as a single system, showed solar dominated system was possible using batteries and interconnections between islands

New efforts to consider individual islands, address areas of concern or confusion

Build out:

- Dispatch models for 4 largest systems
- Indonesia-specific cost projections for new technologies (e.g., wind, solar, batteries, EVs)

Key messages:

- Energy security not an issue with renewable dominated systems
- Natural gas should not be a transition fuel
- Government subsidies for coal delay the transition and hurt the economy

Longer-term aim for wider South East Asia program, leading up to COP31

Trip scheduled for June 2025

ENERGY ASIA

Strengthening existing networks to influence strategy

India

teri

CEEW
THE COUNCIL

RMI INDIA FOUNDATION

WRI INDIA

IIT Delhi
Indian Institute of Technology Delhi

Indian Green Building Council

China

INSTITUTE OF CLIMATE CHANGE AND SUSTAINABLE DEVELOPMENT TSINGHUA UNIVERSITY

ENERGY FOUNDATION 能源基金会

RMI CHINA
ENERGY. TRANSFORMED.

中金研究院
CICC Global Institute

CIKD
中国国际发展知识中心
CENTER FOR INTERNATIONAL KNOWLEDGE ON DEVELOPMENT

CASI

Europe

SYSTEMIQ

European Climate Foundation

eurelectric

IDDRI

Clingendael

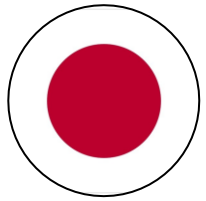
Forum Energii

KREAB
WORLDWIDE

Continuing to enhance local priorities within regions

- SEA/AUS green industrial growth program in consolidation and expansion mode including trade engagement
- Gladstone clean industrial hub phase two
- Indonesia green industrial hub program working with Indonesia government to build relevant policy frameworks
- Vietnam industry hub kicked off and energy analysis underway

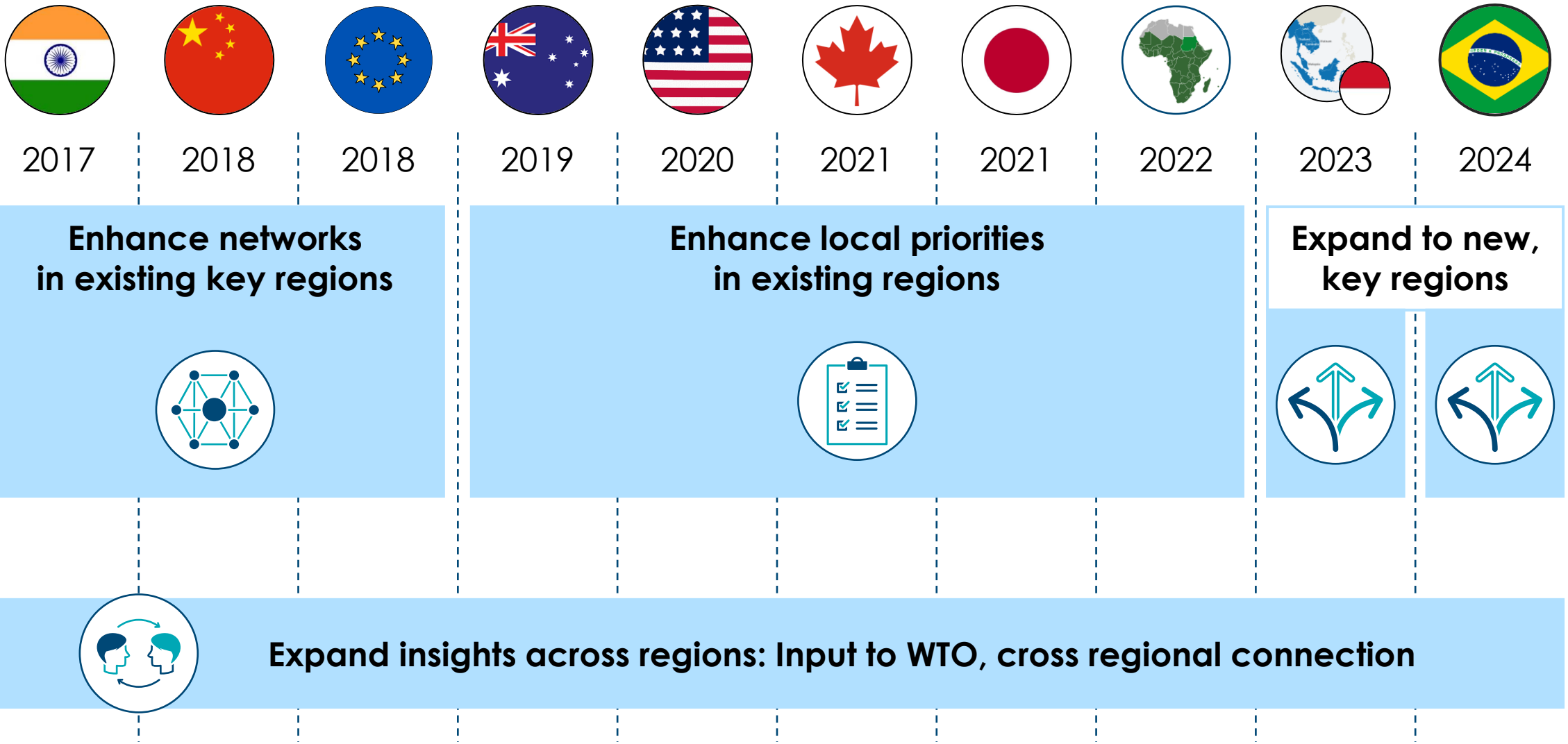
- Impact of energy transition on consumer wallet spend
- Bio/synthetic fuel in British Columbia
- Outreach / education around benefits of energy transition to Canadian consumers ahead ot 2025 election



- Revision of overall 2050 Net Zero scenario and pathway with additional focus on:
  - Chemicals sector
  - Heavy duty vehicles (in collaboration with a new ETI-CGC member, Isuzu)
  - Power sector decarbonization
  - Possibly industrial structure change in 2050 (ex. supply chain of steel making)

- Deep dive into potential volumes of white hydrogen in the US
- Sector specific power demand loads, impact on local power systems, and implications for regional power pools
- [other topics TBC post-election]

Mapping these across regional network shows 5 major activities for 2025



The climate debate is highly **politicised and polarised** as we move from ambition to action. **Disinformation remains rife and fuels the anti-net-zero narrative & back-tracking on commitments.**

German minister threatens 'indefinite driving bans' on weekends POLITICO

New Zealand to push through law to reverse ban on oil and gas exploration Reuters

Japan Must Curb Clean Power Reliance, Warns Leadership Candidate Bloomberg UK

ETC Communications 2-year Programme:

Pillar 1

Disseminating ETC reports

- **Broaden media presence:** focus on Tier 1 media and non-English international media.
- **Explainer content:** concise, informative, digital friendly.
- **Social media campaigns.**
- **Events:** increased presence in key sectoral and regional events.
- **Direct engagements:** structured and targeted outreach.
- **ETC Matters Newsletter:** valuable mailing list incl. journalists, climate activists, policymakers.

Pillar 2

Repackaging existing insights

- **To inform and explain:** dispelling myths, correcting misinformation, and explaining and re-explaining complex ideas.
- **Shorter, more digestible forms** (e.g., videos, social media posts, blogs)
- **Informing the debate** via timely op-eds and articles on international media platforms.
- **Spreading the word** at key climate events (e.g. New York Climate Week, Clean Energy Ministerial, COP).

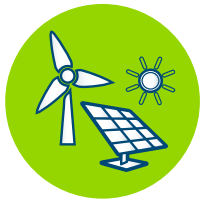
Pillar 3

Informing the influencers and reaching new audiences

- Developing **broadcast opportunities.**
- Expanding **digital storytelling** (TED Talks, Talking heads videos)
- Leveraging **social media network.**
- **Audience specific** tailored content.
- Collaboration with **other communications partners** (e.g, Global Optimism, GSCC).
- Test **direct outreach** with high impact interest groups (NGO groups, University programmes).

Towards COP29 & COP30

COP29, 30 & 31: 4 priorities to deliver action through future COPs



Delivering and increasing the COP28 commitments to triple renewable capacity by 2030 informed by work on barriers to clean electrification

Further progressing the global debate about moving beyond fossil fuels, seeking to gain increasingly strong and specific commitments to the rapid phase-down

Supporting the work of the ITA, which is envisaged as a multi-COP initiative. Driven by MPP but with the ETC focused on identifying, and driving action on, implications for the wider energy transition (e.g., the scale of clean electricity or H_2)

Developing more ambitious and comparable NDCs in the next NDC ratchet – ensuring they reflect commitments made at COP26 and COP28, real economy action, and latest technological progress.

Working with the Mission Possible Partnership

ETC continued to support the MPP in 2024 and will continue to collaborate in 2025, focusing on four areas:

Building on our work with the sector transition strategies, this year we **integrated sectoral insights on energy productivity** into ETC work on this topic. **Insight briefing publishing in early 2025**.

Continuing to work with the MPP to ensure that the **cross-sectoral implications** for the wider energy transition (e.g., the scale of clean electricity or hydrogen production required) are identified and acted upon, exploring a short joint publication on this topic.

Supporting **first-of-a-kind project conversations** and **integrating insights** from the MPP's early hubs projects to inform our barriers to clean electrification work on grids and energy storage & flexibility.

ITA INDUSTRIAL TRANSITION ACCELERATOR

Supporting the work of the **ITA,** in particular i) supporting the MPPs focus on accelerating the build-out **of critical hydrogen and CCS infrastructure**; ii) advocating for the **policies** (regulations or carbon prices) need to **move beyond 1st of a kind projects.**

MISSION POSSIBLE PARTNERSHIP

Supporting ETC Members

ETC governance and progress review

- 2x Commission meetings and 3x Representatives meetings
- Hybrid meetings accompanied by in-person dinners
- Member portal, launched in 2024, houses all ETC information and upcoming events
- ETC Insider – newsletter reserved for ETC members

Knowledge Building

- 1–3 expert workshops: for each of our analytical workstreams.
- Bilateral meetings: for additional input from ETC members.
- Endorsements: Continue with our report review and endorsement process for all major reports.

Advocacy and Outreach

- Collaborate with member comms leads via Comms club; + comms support for new members
- Tailored thematic webinars open to all member staff
- Speaking roles and conferences
- Participation at Member events (incl. C Suite)
- Regional level engagements

Raising the ambition of ETC members

- Working with ETC members' board and executive management
- Building on existing members to recruit and influence other companies, organisations, business associations, and multi-stakeholder initiatives
- Due diligence of current and potential members

Additional considerations for 2025:

- Continue member webinar series
- Increase engagement through member portal
- Explore additional opportunities for ETC input to member strategy discussions

ETC 2024 Membership fees

FUNDING MODEL		2024 Membership fee (euros)	2025 Membership fee (euros)
Band 1	Annual Revenue >$115bn	325,000	341,000
Band 2	Annual Revenue $63-120bn	135,000	142,000
Band 3	Annual Revenue $16-63bn & large financial institutions	110,000	115,000
Band 4	Revenue $10-16bn	-	80,000
Band 5	Revenue $3-10bn *(previously Band 4)*	57,500	60,500
Band 6	Revenue $63m-3bn *(previously Band 5)*	40,000	42,000
Band 7	Revenue <$63m *(previously Band 6)*	29,000	30,500
Band 8	Pre-revenue *(previously Band 7)*	20,000	21,000