

The climate reality check

Welcome to the disorderly transition.

The impacts of climate change — both physical and transitional, are here. Companies across sectors are experiencing tangible financial losses due to disruptions in operations and supply chains, which ultimately impacts corporate valuation. The threat of significant value erosion has become a board level concern. One of the critical actions that corporates can take is deploying renewable energy solutions across their operations and supply chains.

However, the *2025 Statistical Review of World Energy*, released in June by the Energy Institute in collaboration with KPMG, confirms a hard truth: while renewables are growing fast, the sector is still not growing fast enough to help deal with the climate crises. Electricity demand is surging, emissions are rising, and the world is drifting off course from its climate targets. For corporates, this isn't just a climate issue — it's a strategic one. Access to clean, affordable energy is becoming a defining constraint in the race to decarbonize. And unless we rethink how we scale renewables, we risk locking in a future defined not by 1.5°C, but by 2.4°C — and all the disruption that comes with it.

The illusion of progress: Renewables rise, but fossil fuels still dominate

In 2024, global electricity demand rose by 4 percent, outpacing overall energy demand growth (2 percent) — a trend driven by electrification, digitalization, and the rapid expansion of AI infrastructure. Wind and solar grew by 16 percent — nearly nine times faster than total energy demand — and accounted for over half of new electricity generation. Despite this progress, fossil fuels still make up 87 percent of the global energy mix, however we do note that clean power (renewables, hydro, and nuclear) made up approximately 40 percent of the global electricity mix in 2024.¹

This is very disappointing to see given all of the technology improvement and cost reduction we have seen in the sector over the past number of years. We believe this has serious implications for action on climate.

This disconnect between growth and scale is at the heart of the challenge. For corporates, especially those with ambitious net-zero targets, the availability of clean, affordable, and reliable electricity is becoming a critical constraint — particularly in regions where grid infrastructure is outdated or permitting processes are slow.

The 1.5°C pathway is closing — fast

Global energy-related carbon emissions rose again in 2024, reaching a record 40.8 GtCO₂e. This marks the

fourth consecutive year of emissions growth, despite record investment in clean energy. The implication is clear: the world is no longer on track for 1.5°C. According to the International Energy Agency,² current policies and trends are steering us toward a 2.4°C future.

What a 2.4°C world looks like

A 2.4°C rise in global temperatures isn't just a missed target — it's a fundamentally different world. One where physical climate risks become systemic, and the cost of inaction becomes unmanageable. Here is what we could potentially face:

- **Extreme heat:** Heatwaves will become more frequent and intense, particularly in tropical and subtropical regions. Outdoor work is projected to become increasingly unsafe in many regions, particularly in tropical and subtropical zones, due to rising heat stress.³
- **Water stress:** Freshwater availability could drop by up to 50 percent in regions like the Mediterranean, West Africa, and parts of Asia.⁴
- **Food insecurity:** Crop yields for staples like maize and wheat could decline by 20–40 percent in vulnerable regions, increasing the risk of famine and social unrest.⁵
- **Sea level rise:** Global sea levels could rise by 50–80 cm by 2100, threatening coastal infrastructure and displacing tens of millions.⁶

¹ <http://energyinst.org/statistical-review>

² <https://www.iea.org/reports/world-energy-outlook-2023>

³ https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_LongerReport.pdf

⁴ <https://www.worldbank.org/en/news/immersive-story/2023/09/12/droughts-and-deficits-the-global-impacts>

⁵ <https://www.fao.org/agriculture-economics/publications/detail/en/c/1644606/>

⁶ <https://sealevel.nasa.gov/ipcc-ar6-sea-level-projection-tool>

- **Biodiversity loss:** Coral reefs would face near-total extinction, and ecosystems such as the Amazon and Arctic tundra could reach irreversible tipping points.⁷
- **Compound shocks:** The likelihood of simultaneous climate events — drought, flooding, crop failure — increases significantly, with cascading effects on global trade, migration, and financial systems.⁸

There are increasing systemic challenges:

The rise of AI and digital infrastructure is accelerating electricity demand, but the energy system is struggling to keep pace. As outlined in the KPMG report, *Turning the Tide in Scaling Renewables (2023)*, the barriers are systemic and interconnected, including:

- **Policy challenges:** Governments are not adapting quickly enough to the new realities of rising and changing demands for energy.
- **Grid infrastructure and permitting delays:** The practicalities of delivery are proving extremely challenging.
- **Supply chain fragility:** Critical components — from transformers to rare earth minerals — remain vulnerable to geopolitical and logistical disruptions.

These challenges are not new, but they are now urgent. Without coordinated action, the gap between clean energy ambition and delivery will continue to widen — with real consequences for corporate decarbonization strategies, energy security, and climate action.

But there are some positives on the horizon:

The role of corporates in helping to scale renewables

As the reality of climate risk starts to impact businesses both in their own operations and more, particularly across their supply chains, corporates are doubling down on taking meaningful climate action and embedding strategic initiatives on mitigation and adaptation in the form of transition plans. One of the key issues emerging as corporate strive to achieve their net zero ambitions is the lack of access to renewable energy for both their own operations (scope 2) and across their value chain (scope 3). Increasingly, corporates are recognizing that they have a role in helping to drive the renewables agenda, and there is not much greater willingness to engage with Governments and other key stakeholders in figuring out the solutions that will help change the overall energy mix in a positive way. This type of public-private dialogue is essential to making progress.

Transition Finance: Unlocking Capital for Clean Energy

On a more optimistic note, one of the most promising developments is the emergence of transition finance — capital explicitly designed to support emissions reductions in hard-to-abate sectors. Renewables are central to this agenda, not only as a decarbonization tool but also as a way to help reduce exposure to regulatory risks such as the EU's Carbon Border Adjustment Mechanism (CBAM).

For corporates, this means:

- Embedding renewables into credible, science-aligned **transition plans**
- Using transition finance to **de-risk investments** in clean energy infrastructure
- Collaborating with utilities, regulators, and investors to **unlock access** to clean power at scale.

Energy resilience driving innovation

The growing focus on energy resilience, whether in response to climate risk, supply chain disruption, or geopolitical shocks, is accelerating innovation. We're seeing businesses rethink their operating models, invest in smarter infrastructure, and look at decentralised solutions like storage and private-wire renewables. With the rising demand from AI and energy being the number one operating cost, we are likely to see innovation in energy efficiency. This push for resilience is not a setback, it's an engine for long-term transformation.

Renewables is one of the most optimal long-term approaches to help meet the challenge of energy security, affordability and sustainability.

One very clear truth should not be forgotten. For many different reasons, we believe that renewables should be the ideal method to help solve for the challenges around energy security and independence, affordability and sustainability because:

- in many parts of the world, it is the cheapest method;
- renewable generation infrastructure can be deployed quicker than any other energy solutions;
- the underlying input, wind and solar power, exists in abundance; and,
- it is the most efficient solution.

⁷ <https://www.ipbes.net/global-assessment>

⁸ https://www3.weforum.org/docs/WEF_The_Global_Risks_Report_2024.pdf

Conclusion: From ambition to execution

The 2025 Statistical Review of World Energy underscores a critical truth: we are in a period of energy addition, not substitution. Clean energy is growing — but so is fossil fuel use. The result is a disorderly transition, rising emissions, and a narrowing window for climate action.

For corporates, this means the climate challenge is no longer just about ambition — it's about execution. Transition plans must be grounded in reality, backed by finance, and aligned with infrastructure. And above all, they must be accelerated. Because in a 2.4°C world, the cost of inaction will be measured not just in emissions — but in disruption, displacement, and risk.

Corporates must play a key role, along with governments, in helping to avoid the consequences of a disorderly transition and nowhere is this more important than in helping to scale renewables capacity globally.

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