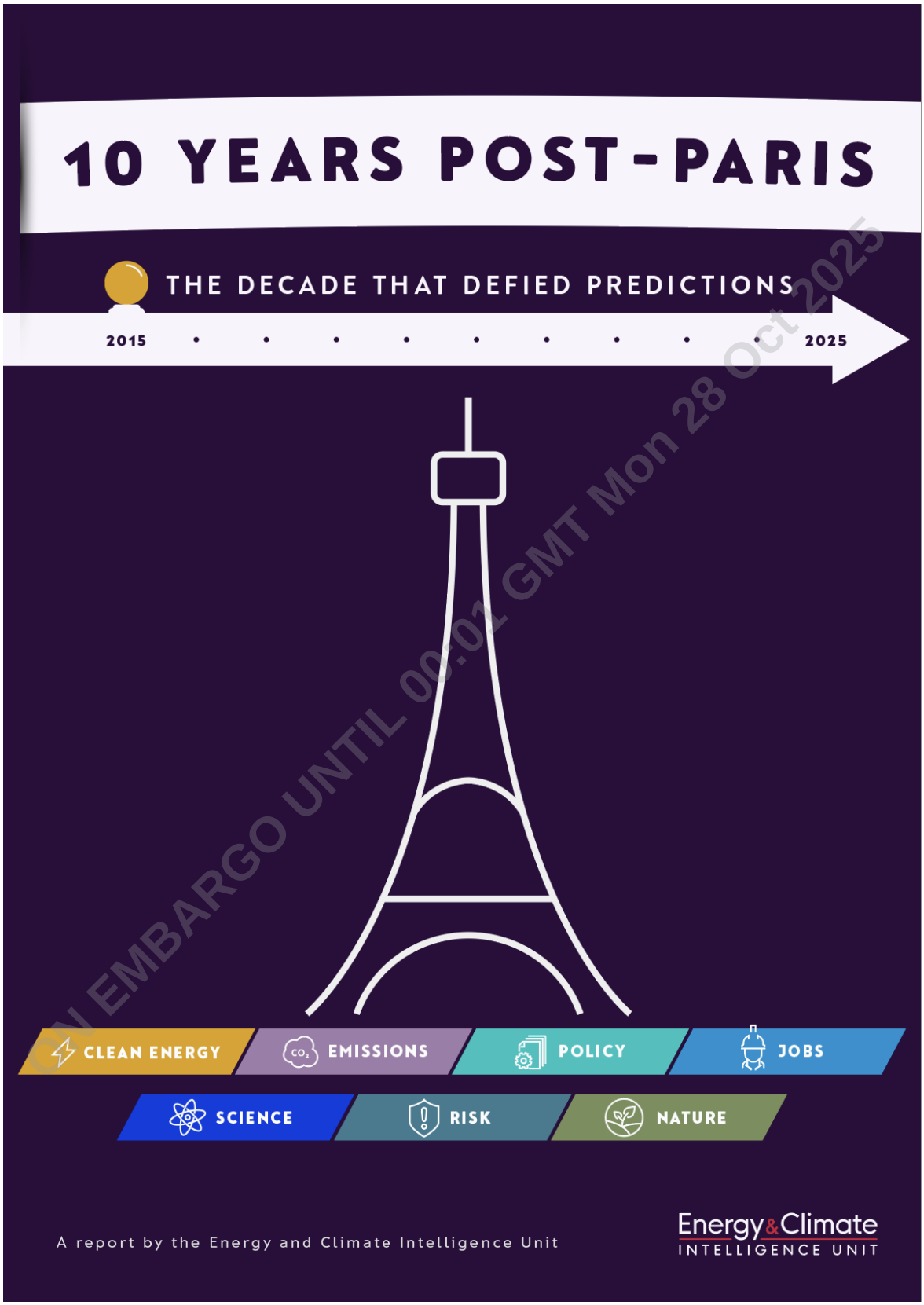


Executive Summary

Ten years after the Paris Agreement, the world is in a markedly different place. A decade ago, the world was heading for around 4˚C of heating by 2100; today, that projection is closer to 2.6˚C. This shift reflects an extraordinary surge in clean energy deployment, stronger policy frameworks and the mainstreaming of net zero as a common global goal to tackle climate change. More progress is still needed, but progress there has been.

Renewables have grown at record speed, defying every forecast. Solar capacity is being deployed annually at 15 times what was predicted in 2015, wind has more than tripled, and renewables now meet at least four-fifths of global electricity demand growth. Investment in clean energy is beating fossil fuels at a ratio of 2 to 1 — and growing — and in major economies like the EU, China, India and the US, that gap is even wider. Electric vehicle (EV) sales have achieved a 20% global market share, six years ahead of IEA forecasts, and the Paris target of 100 million EVs globally by 2030 should be met early.

Policy has managed to keep pace. In 2015, 'net zero' was an obscure scientific concept; today, at least 83% of the global economy is covered by net zero targets, with 139 national targets, most of which are embedded in formal policy documents or enshrined in law. The number of national climate framework laws and climate councils have tripled since 2015, and climate litigation has become a powerful driver of accountability. New international standards — from the ISSB's disclosure rules to the ISO Net Zero Standard and the Science Based Targets initiative — are moving climate action from voluntary to verifiable.

Science has advanced too. We can now measure how much climate change increases the likelihood and severity of extreme heat and weather events, and scientists have narrowed the range of how much warming is expected if carbon dioxide (CO_2) levels in the atmosphere double.

Nature has gained overdue attention. New global pacts — such as the High Seas Treaty and the Kunming-Montreal Global Biodiversity Framework, which includes the 30x30 commitment to conserve at least 30% of the world's land, freshwater and ocean by 2030 — mark genuine progress toward restoring ecosystems. Due to renewed policy and enforcement, deforestation in Brazil's Amazon has halved since 2021.

The UK remains a global leader. Its 2008 Climate Change Act pioneered the model of legislated-for emissions reductions, long-term carbon budgets, independent advice and regular procedural accountability, while in 2019 it became the first G7 nation to enshrine net zero in law. COP26 in Glasgow reinforced the role of global collaboration, spurring commitments from several other countries including India, as well as landing major agreements on deforestation, cutting methane, phasing out coal, and increasing electric vehicle uptake globally. Even with the US retreat from climate policy under Trump, 19 members of the G20 still have net zero targets. The UK has also walked the talk — cutting

its greenhouse gas emissions by 53% between 1990 and 2023, while growing its economy by 82% (Carbon Brief, 2024). In 2024, renewables contributed more electricity to the UK grid than fossil fuels for the first time. And in 2024, the UK came to COP29 with an early and bold new nationally determined contribution (NDC) to cut emission by at least 81% by 2035.

Ten years post-Paris, the direction of travel is clear: the clean energy transition is more advanced than analysts projected a decade ago — and more advanced than many people realise. The challenge now is to turn that real-economy momentum into a decisive bend in the global emissions curve, while scaling up finance and technology flows — especially for developing economies — and ensuring the benefits are felt by people everywhere.

COP30 in Belém — where all countries are expected to have submitted new emissions-cutting nationally determined contributions — offers a pivotal opportunity to consolidate this progress in the face of U.S. opposition. If it can deliver on its goals — reinforcing multilateralism, ratcheting up mitigation ambition, and protecting and investing in nature — it can lay the groundwork for the next great leap in global climate ambition over the coming decade.

Contents

Introduction

A decade ago, the world was on track for around 4˚C of heating by 2100. Today, that projection has fallen to around 2.6˚C — still far above the guardrail of 1.5˚C, but proof of remarkable progress in policy, technology and ambition since the Paris Agreement was endorsed in 2015 by nearly 200 countries and opened for signature the following year.

The Paris Agreement changed the course of climate politics. For the first time, nearly every country agreed to a shared framework for limiting heating to 'well below 2˚C' and pursuing efforts to stay near 1.5˚C. Since then, emissions trajectories, investment patterns and corporate strategies have shifted in ways once seemed improbable. Wind and solar have outperformed every forecast, electric vehicles (EVs) are breaking records and fast becoming mainstream, and net zero has become both a universal policy goal and a private sector benchmark.

This transformation reflects a decade of real-economy progress. Clean energy investment now doubles fossil fuel spending, four-fifths of the global economy is under net zero targets, and more than one third of countries have passed national climate framework laws. The Paris framework has also spurred new systems of accountability — from disclosure standards to independent expert bodies — that make climate action harder to reverse and less at the mercy of political volatility and diplomatic obstruction. The UK's own Climate Change Act pioneered this model, embedding emissions reductions targets into law, and establishing carbon budgets, independent advice and parliamentary scrutiny that later inspired frameworks from Europe to Latin America. As the first G7 country to legislate net zero, and host of COP26 in Glasgow, the UK helped turn ambition into global architecture.

The task remains enormous. A temperature trajectory of 2.6˚C by 2100 still implies unacceptable risks of tipping points and irreversible impacts. Every fraction of a degree matters. The coming decade must turn foundational progress into structural and sustained declines in global emissions — the defining test of whether Paris can deliver on its promise of achieving a 'balance between anthropogenic emissions by sources and removals by sinks' in the context of sustainable development. It must also unlock the finance and technology needed for developing countries to leapfrog over fossil fuels to renewables-powered, resilient economies. Signs of progress are emerging, driven largely by Chinese exports of the 'new three': solar PV, batteries and EVs.

As the world looks toward COP30 in Belém, Brazil, the challenge is not to reinvent the Paris framework but to strengthen and reinforce it — deepening cooperation, scaling up finance and embedding a just clean energy transition in every economy so that people and communities feel the benefits. The next ten years will determine whether the world can turn unstoppable clean energy momentum into enduring emissions decline — a positive tipping point for current and future generations.

Methodology

This report provides a broad overview of progress across multiple dimensions in the decade since the Paris Agreement was signed, comparing — where possible — projections and forecasts made around 2015 with actual outcomes. Data is drawn from a wide range of sources, with references and brief methodological notes included in the relevant sections. The findings combine new and existing ECIU analysis with previously published work from third parties.

A companion data file containing key figures and sources is available on request. For questions about data or methods, please contact the lead authors: John Lang, Matt Elliott and Gareth Redmond-King.

A: Clean energy

To understand just how far and how fast the clean energy shift has come, this section looks back to 2015 — the year the Paris Agreement was forged — and compares what was expected then with what has unfolded since. At the time, mainstream forecasts anticipated slow, incremental progress. The International Energy Agency projected modest growth in renewables and continued dominance of fossil fuels through 2040. Few imagined that solar and wind would outpace every major prediction within a decade.

These shifts underpin a broader structural change. For the first time in the modern energy era, renewables are matching — and at times exceeding — global demand growth (*Ember, 2025c*). The expansion of solar and wind is changing the economics of power generation and preparing the ground for a structural decline in CO_2 emissions.

Renewables Deployment

Power generation

In 2015, BP's Energy Outlook predicted that the global non-fossil share of power generation would rise modestly from 32% to 38% by the end of its forecast period in 2035. By 2024 **non-fossil generation already accounted for 41% of the global power supply** (*EMBER, 2025a*) – making more progress in 10 years than was predicted over 20.

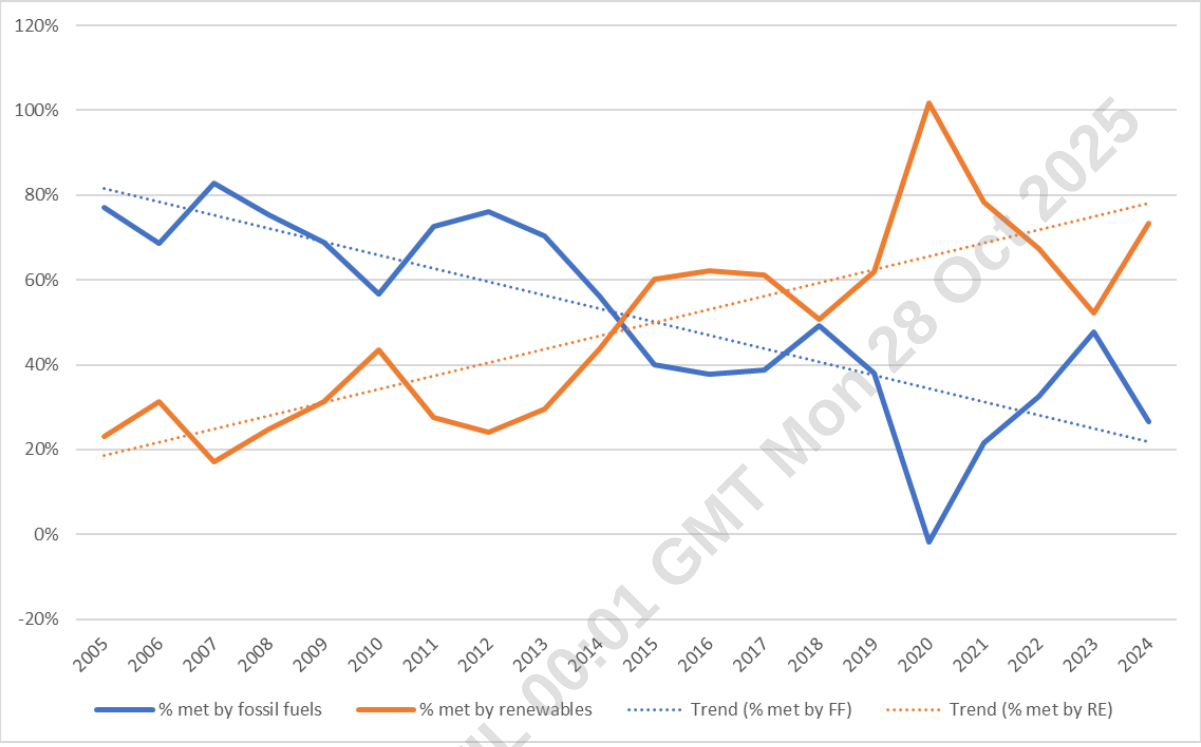
Using the global Energy Dataset from Our World in Data (OWID) (Our World in Data, 2025a), we looked at annual growth in electricity generation by source since 2005, and the extent to which total demand increases were met by growth in fossil fuel generation or clean power.

The overall increase in the clean power share of the total – 8.5% over 10 years – has come in a decade when global electricity demand has grown faster than ever before, but fossil fuels are meeting a dwindling proportion of that growth:

- In the 10 years before the Paris Agreement was signed, fossil fuel generation met 68% of global electricity demand growth.
- Since 2015, global electricity demand has grown faster than ever, but **renewables have met two-thirds of this increase in demand**.
- This trend is accelerating: since Covid, renewable generation has met 75% of global power demand growth. **In 2024, it was 80%**.
- In 2024, global electricity **generation from renewables grew over seven times faster than fossil fuel generation**, and the gap is widening.

Calculated over a rolling three-year window to reduce noise, the increasing dominance of renewable generation in meeting demand growth is clear:

Chart 1: Three-year global electricity demand growth met by fossil fuels vs. low carbon sources



Source: Our World in Data (2025a), Global Carbon Budget (2024), ECIU Analysis

Global Wind Capacity Growth

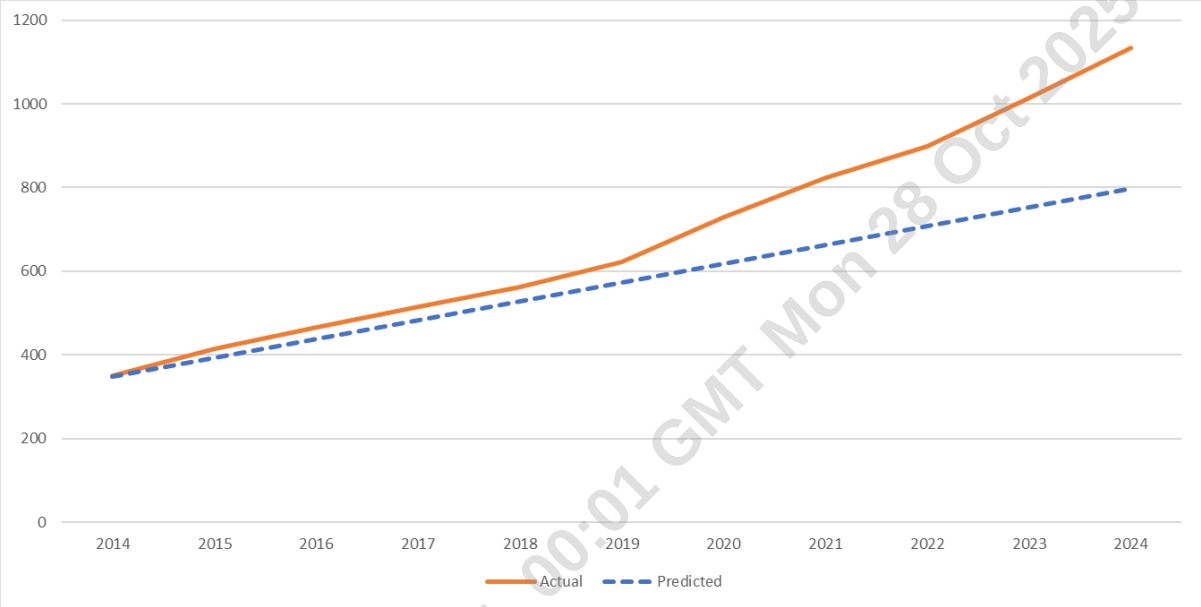
The global renewables boom has been driven above all by wind and solar. Using data from the International Energy Agency's (IEA) annual World Energy Outlook reports for 2015, 2020 and 2024, alongside its most recent 2025 Global Energy Review publication, we construct a picture of annual forecast capacity totals to set alongside actual installations (*IEA, 2015; IEA, 2020; IEA, 2024a; IEA, 2025*).

- The expansion of onshore and offshore wind generation capacity has beaten forecasts in every year since 2015.
- The 2015 World Energy Outlook (*IEA, 2015*) predicted 40-45 GW of new wind generation every year through to 2040; **actual additions in 2024 were more than 2.5 times this, at 120GW**.

- Total global installed wind capacity in 2024 was 42% higher than forecast in 2015 and accelerating: since covid, annual installations have risen every year.

- Latest forecasts indicate another doubling of total capacity in the remainder of the decade – adding another TW by 2030 (*GWEC, 2025*).

Chart 2: Global wind generation installed capacity, 2015 IEA forecasts vs. actuals (GW)



Source: IEA (2015, 2025a), ECIU Analysis

Global Solar Capacity Growth

If wind generation capacity has exceeded expectations, solar PV has demolished them. The IEA's 2015 outlook predicted that total global solar capacity would only reach around 530GW in 2024 (IEA, 2015) — in fact, the world added **553GW of new capacity last year alone** (IEA, 2025a).

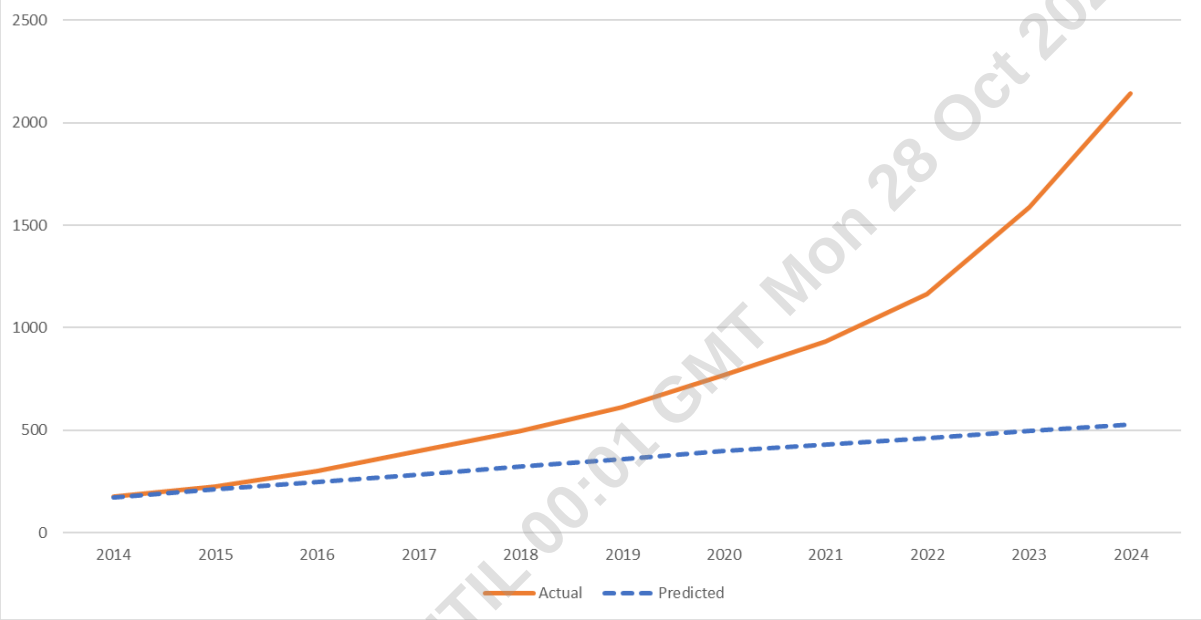
- The global total installed solar capacity now stands at over 4 times the deployment predicted by the IEA in 2015 and continues to accelerate.

- Solar generation is doubling every three years; having taken eight years to go from 100 to 1,000 TWh between 2013 and 2021, it then took only another three to pass 2,000 TWh (EMBER, 2025b).

- The 2015 outlook predicted total global solar generation of around 680 TWh by 2024. This mark was passed in 2019, with the actual 2024 figure more than triple the forecast.

- Solar generation capacity added in 2024 was **15 times** the IEA's 2015 prediction.

Chart 3: Global solar generation installed capacity, 2015 IEA forecasts vs. actuals (GW)



Source: IEA (2015, 2025a), ECIU Analysis

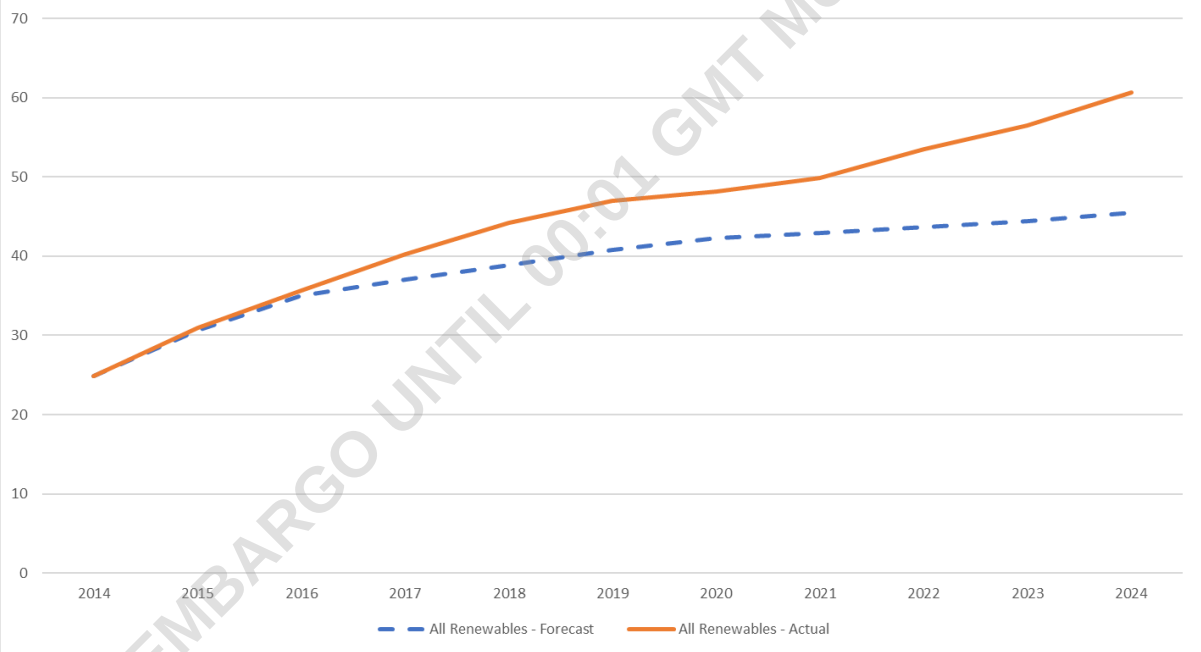
UK Renewable Energy Growth

The UK has taken significant strides in the decarbonisation of its electricity supply. This has been underpinned by a successful rapid shift away from coal fired power in just 12 years, dropping from just under 40% of the electricity mix in 2012 and ending with the **permanent closure of the last of the UK's coal power stations in 2024**. This capacity has been almost entirely replaced by clean energy, with renewable generation overtaking fossil fuels for the first full year in 2024 (EMBER, 2024).

We used OWID's Energy dataset (OWID, 2025) alongside UK government projections for renewable generation capacity (DECC, 2015) and official statistics from the Department for Energy Security and Net Zero (DESNZ)'s DUKES tables for actual figures, to compare expectations at the time of the Paris agreement with outcomes.

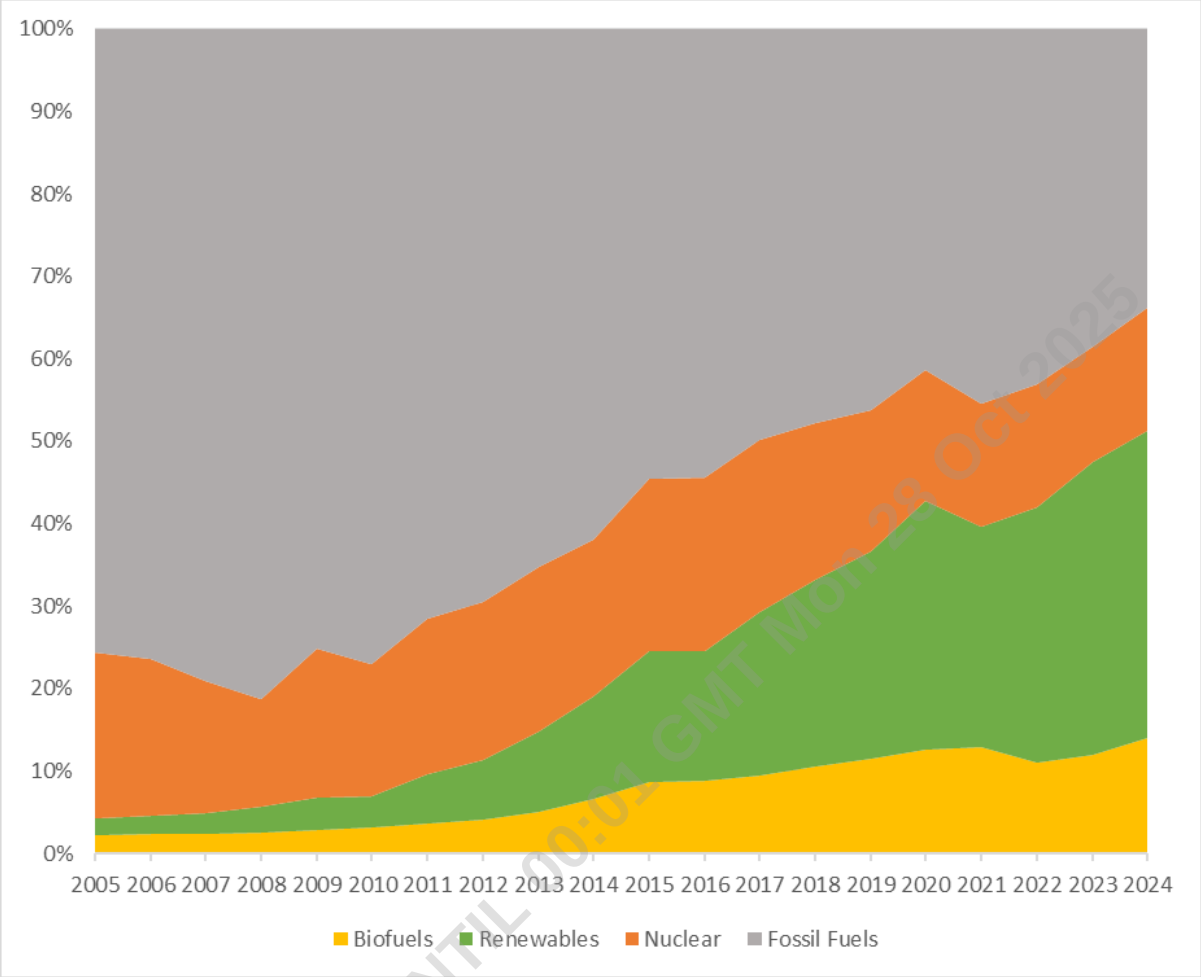
- Renewable installations in the UK have consistently outpaced projections since 2015.
- 2024 capacity additions were a third higher than forecasted in 2015.
- After the pace of additions slowed during Covid, capacity growth has accelerated.
- Fossil fuels accounted for just 34% of total power generation in 2024, down from 55% in 2015
- Total installed capacity of onshore and offshore wind has tripled in the last decade

Chart 4: UK Renewables Deployment: 2015 Forecast vs. Actuals (Installed capacity, GW)



Source: DECC (2015), DESNZ (2025), ECIU Analysis

Chart 5: UK share of electricity generation by source, 2005-2024



Source: Our World in Data (2025a), ECIU Analysis

Renewable Energy Cost Declines

The falling cost of renewables over the last decade has been a major driver of rapid capacity expansion around the world. In 2015, BP's Energy Outlook (*BP, 2015*) asserted that ***"even by 2035, grid-scale PV still require a material carbon price to compete with efficient gas combined cycle generation."*** In the decade since, both wind and solar generation have seen precipitous falls in the costs of capacity and generation.

In 2020 the IEA declared solar power the "cheapest electricity in history" (*IEA, 2020*), while the International Renewable Energy Agency (IRENA)'s analysis confirmed that 91% of renewable energy projects globally are now cheaper than the most cost-competitive fossil fuel alternatives (*IRENA, 2025*).

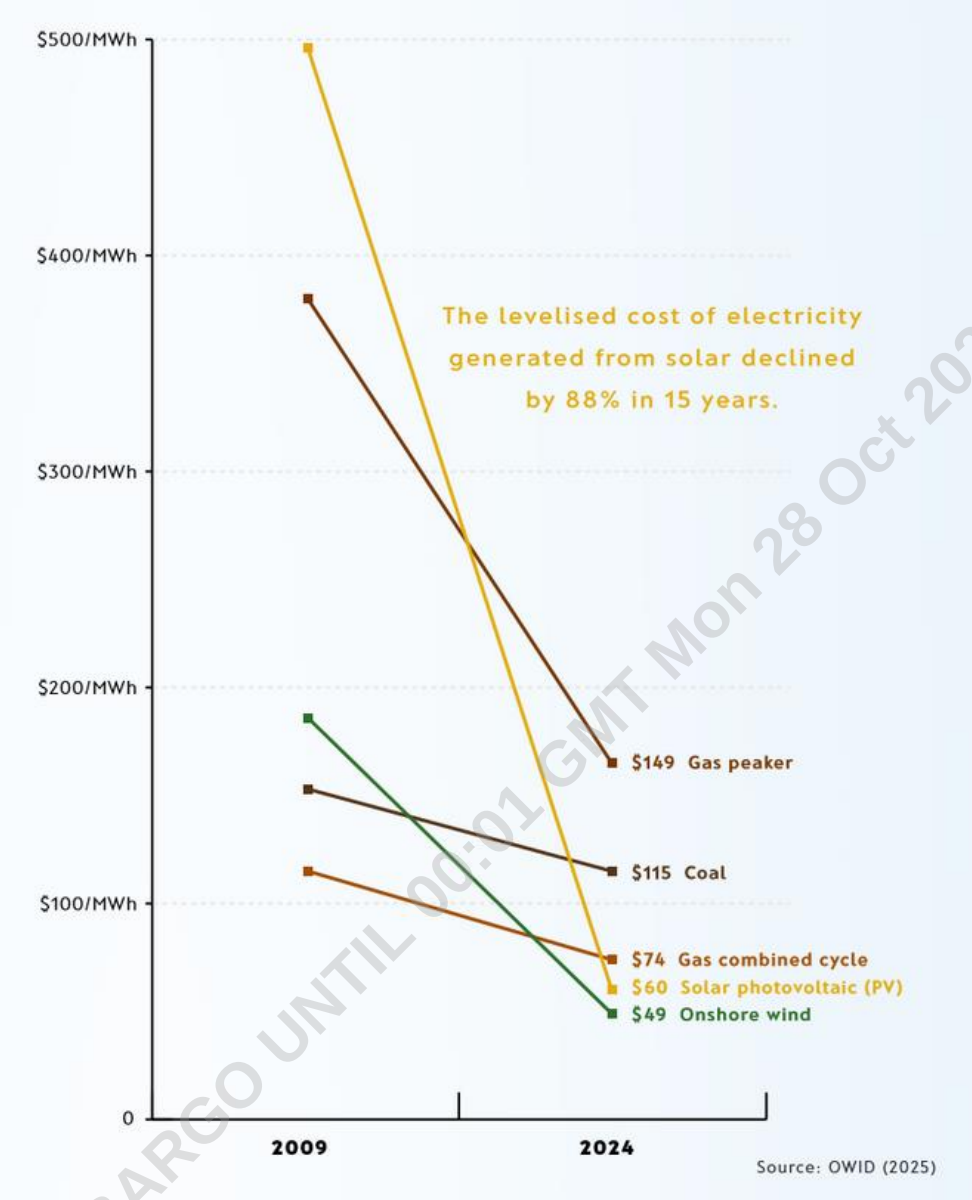
- **Solar PV prices have fallen 99.9% since 1975** (BBC News, 2025), and **by 66% in the last decade** (Our World in Data, 2025b).

- In 2024, **average battery prices declined by 40%**, reinforcing IEA and analyst expectations that the cost of solar-plus battery energy storage system (BESS) generation will continue to fall (Colthorpe, A., 2025)

- The levelised cost of electricity (LCOE) of solar PV plus batteries is already competitive with new coal-fired power in India and China, and new fossil gas-fired power in the US and Germany (IEA, 2025b)

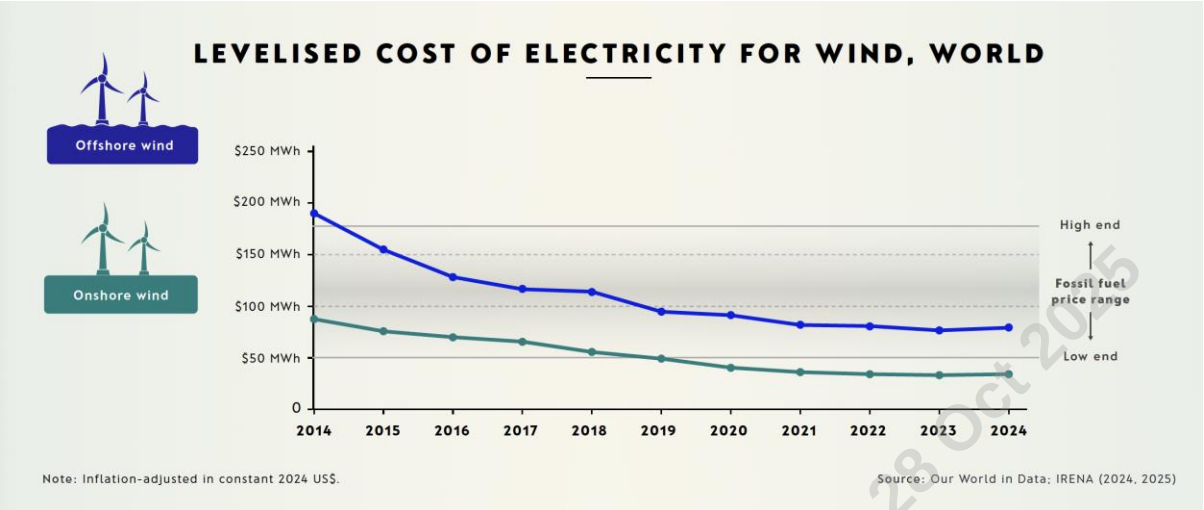
- Globally, **new onshore projects produce electricity at a cost of 67% below fossil alternatives in 2023** (IRENA, 2024)

Chart 6: Global Levelised Costs of Electricity, 2009-2024



Source: Our World in Data (2025)

Chart 7: Global Levelised Cost of Electricity for Wind, 2014-2024



Source: Our World in Data (2025d)

Energy Investment

With costs falling sharply and clean power projects around the world offering significantly better value than fossil fuels, it's little surprise that global financial flows are responding. At the time of the Paris agreement, fossil fuel investments accounted for 55% of total global energy investment but dropped below half the following year and has kept falling. Using data from the IEA's World Energy Investment report series (IEA, 2025c; IEA, 2025d), we looked at the global picture over the last decade and the trends across the 'Big Four' energy geographies – China, the US, EU and India.

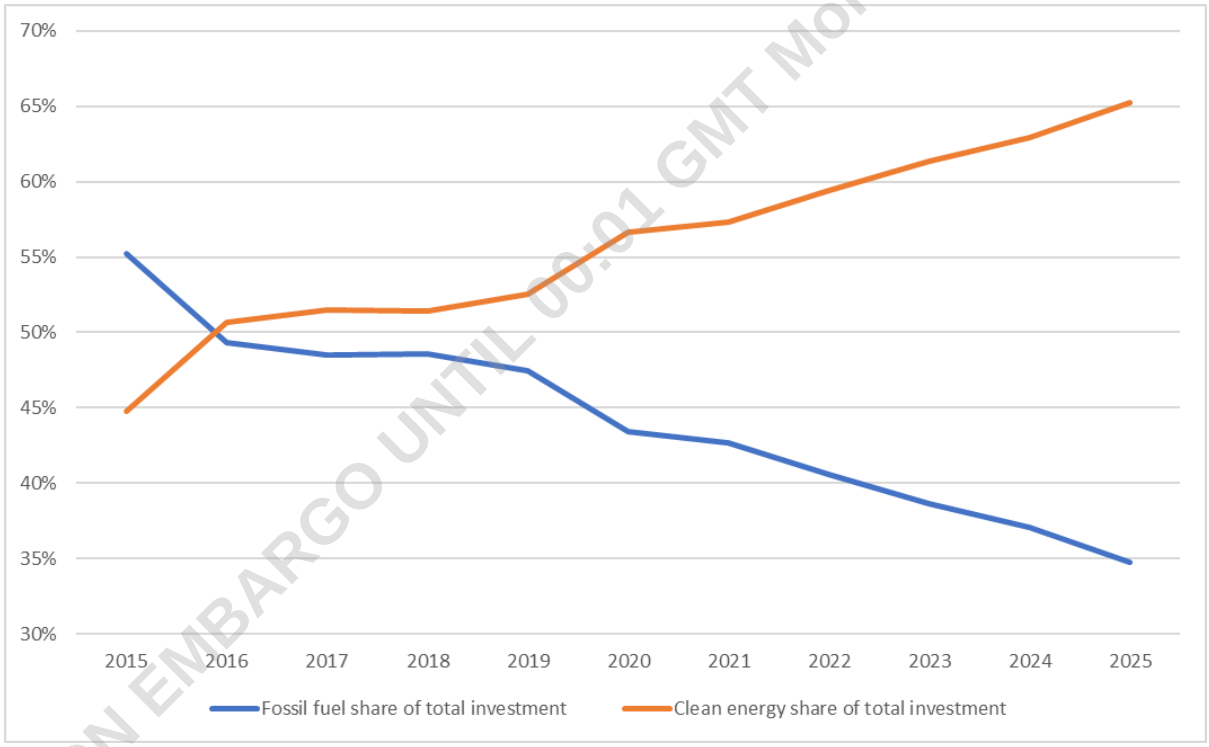
- **Global investment in clean energy overtook fossil fuel spending in 2016 and now outstrips it at a rate of 2 to 1**.
- Annual investment in solar PV surpasses all other generation combined.
- The **Big Four energy geographies account for 62% of global energy investment**.
- In these Big Four territories the trend is even stronger, with **clean energy investment outpacing fossil fuel investment at a rate of $2.6 for every $**1, more than double what it was in 2015.
- Clean energy investment has risen sharply across the big four geographies, while globally fossil fuel investment has fallen in real terms. Chinese and Indian fossil fuel investment continues to rise, but at a fraction of the pace of clean energy

Table 1: Clean energy and fossil fuel investment, 2015-2024

Geography	Clean Energy investment growth, 2015-2024	Fossil Fuel investment growth, 2015-2024
World	68%	-20%
US	73%	-28%
China	97%	19%
India	50%	17%
EU	112%	-26%

Source: IEA (2025c, 2025d), ECIU Analysis

Chart 7: Global Investment in Fossil Fuels and Clean Energy



Source: IEA (2025c, 2025d), ECIU Analysis

Electric Vehicles (EVs)

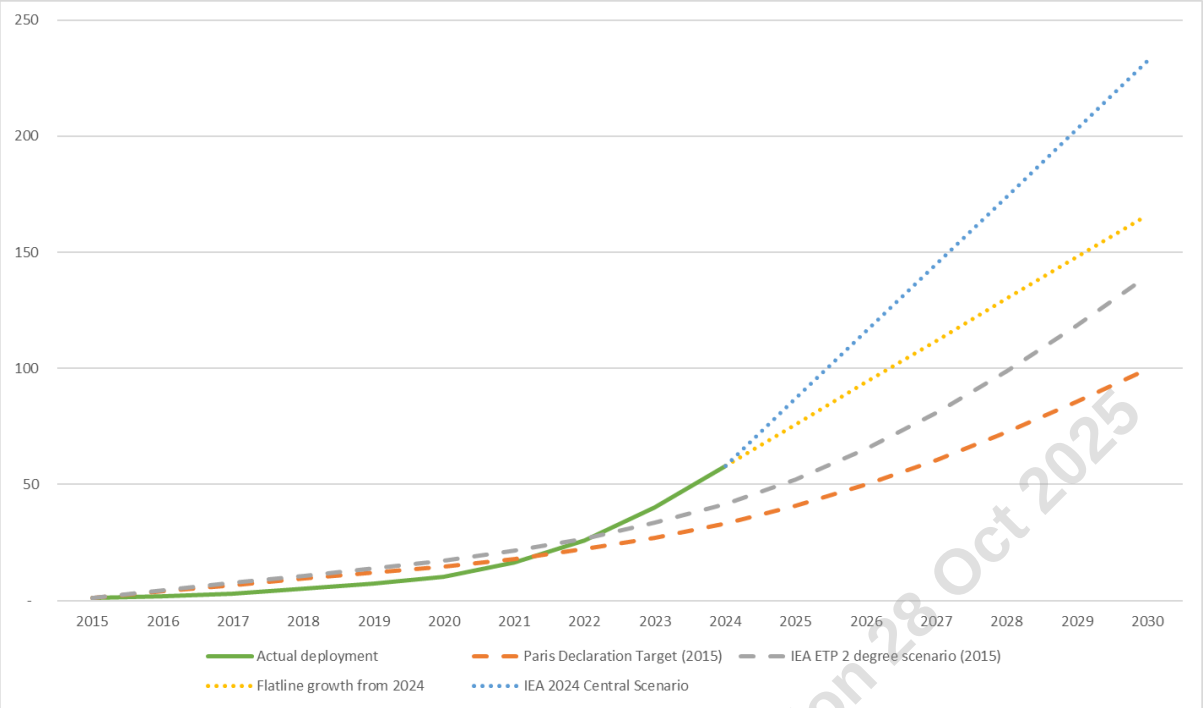
Innovation and cost reductions in battery technology have driven vast improvements in Electric Vehicles in the decade since Paris, and global sales have significantly outpaced forecasts. Our analysis reconstructed growth expectations based on the IEA's Global EV Outlook report series (*IEA, 2016*) and the Paris Declaration on Electro-Mobility and

Climate Change (*UNFCCC, 2015*), in order to compare them against actual EV sales rates (*IEA, 2025e*).

The 2016 Global EV Outlook (*IEA, 2016*) stated that its 2-degree scenario included a deployment target equivalent to a market share of EVs close to 20% by 2030, and 40% by 2040, while the Paris Declaration set a global target of 100 million EVs on the road by 2030.

- **A 20% Global EV market share of new sales was surpassed in 2024**, with 40% set to be achieved in 2030, ten years ahead of the IEA's 2015 2-degree compatible scenario.
- Even making the very conservative assumption of flatline growth from 2024 onwards, **the Paris declaration target of 100 million EVs is on track to be surpassed in 2028**, while the central scenario in the IEA's 2024 Global EV Outlook (*IEA, 2025e*) would hit it as soon as early 2027.
- **2024 deployment is already 40% above the IEA's 2015 projections**, and on track to be **66% higher by 2030**.
- **One in five cars sold globally is now electric** — up from one in a hundred a decade ago (IEA, 2025e).
- In 2024 alone, **EV roll out avoided the use of more than 1.8 million barrels of oil per day** (BloombergNEF, 2024).
- EV-related manufacturing and battery supply chains now **employ 2.7 million people globally** (IEA, 2024c).

Chart 8: Global EV Car Stock (millions): forecasts vs actuals



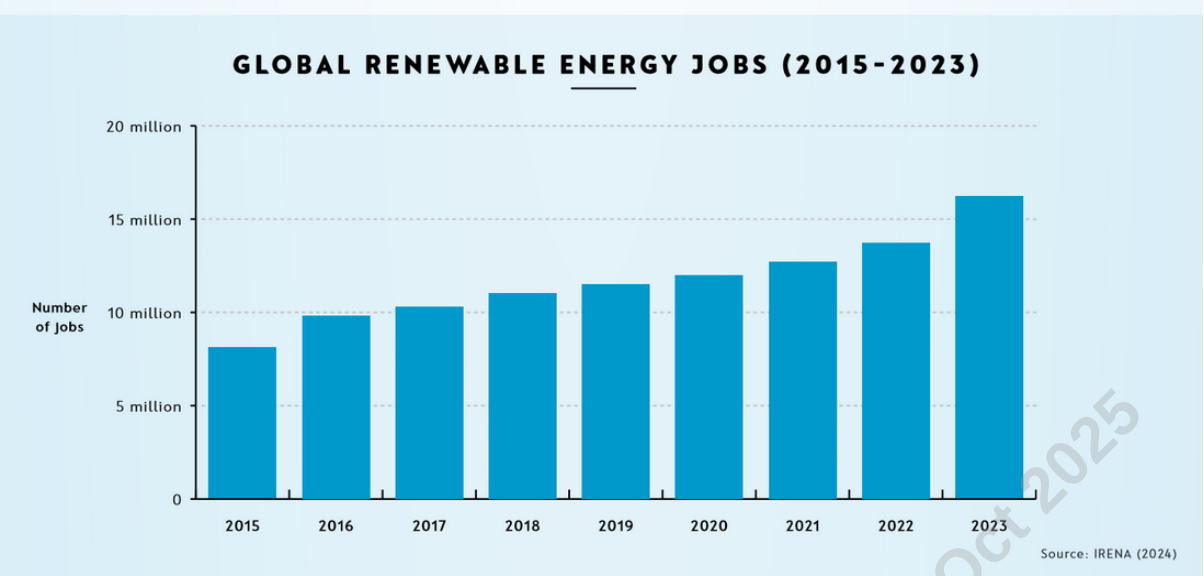
Source: IEA (2016, 2025e), UNFCCC (2015), ECIU Analysis

Clean Energy Jobs and Economic impacts

The clean energy boom over the last decade has generated massive benefits for the global economy, creating millions of jobs and growth around the world. In some regions, notably China whose manufacturing base has driven much of the clean tech innovation and rollout, significant portions of the economy are now driven directly by renewable technology and clean tech supply chains.

- Renewable energy jobs have almost doubled since 2015, climbing from 8.5 million to 16.2 million in 2023 — led by solar PV and wind (ILO, 2024).
- China leads with 7.4 million renewables jobs, the European Union has 1.8 million, and the United States and India more than 1 million each.

Chart 9: Global renewable energy jobs, 2015-2023



Source: IRENA (2024)

- Across the wider energy system and associated supply chains, clean energy now outpaces fossil fuels for employment, with 36.2 million jobs in clean energy compared with 32.1 million in oil, gas, coal and internal combustion engine manufacturing (IEA, 2023)

- IEA analysis demonstrates the impact which the clean energy economy is having on economic growth around the world, in 2023 accounting for almost one third of all economic growth in the EU (IEA, 2024b) and 10% worldwide

- In China, the clean energy sector now accounts for roughly 10% of GDP (US$1.9 trillion) and grew three times faster than the wider economy in 2024 (Carbon Brief, 2025a)

- The UK's 'net zero economy' expanded by 10% in 2024, far outpacing the rest of the economy (ECIU, 2025b). In the process, it created 951,000 full-time jobs and generated £83.1 billion in gross value added.

B: POLICY

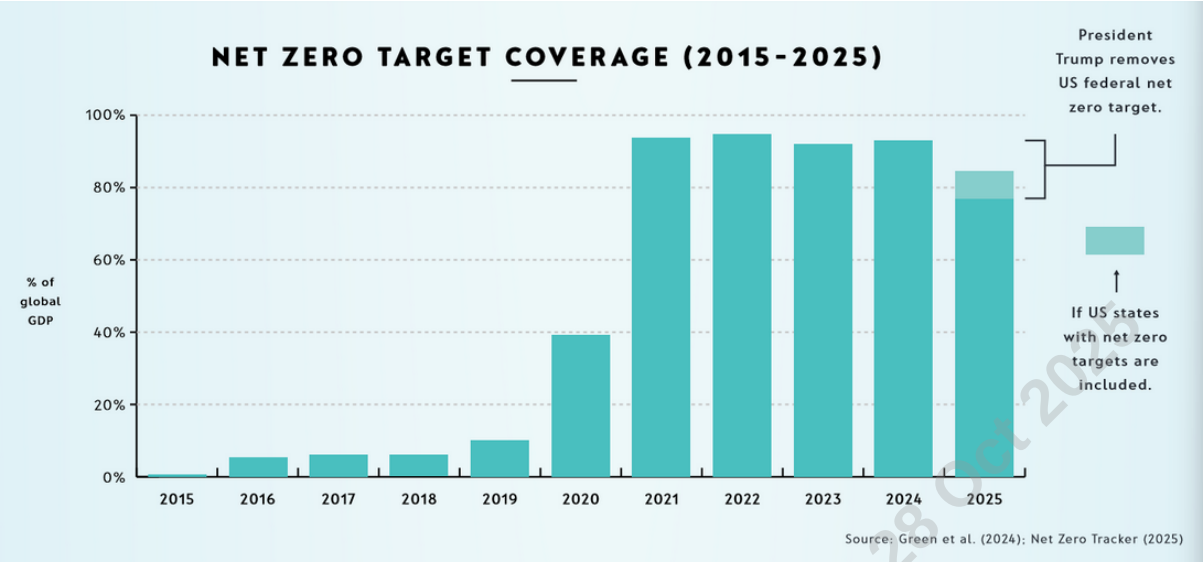
The clean energy revolution and stronger climate policies have moved the world away from the worst climate futures. In most major developed economies and across the OECD overall, emissions have now been in decline for well over a decade. Section A above presents some of the technological and economic drivers which have enabled this, but the Paris agreement in 2015 also kickstarted a decade of policy and legislative advance which together underpin and enable much of the progress right across the global economy.

Net Zero Targets

In 2015, net zero was an emerging concept, referenced obliquely in the Paris Agreement as achieving a 'balance' of emissions and removals 'in the second half of this century.' Since then, the concept has become mainstream in climate policy.

- As of October 2025, at least 83% of the global economy is covered by net zero targets, most of which are now enshrined in law or formal policy. This includes 19 members of the G20 (Net Zero Tracker, 2025).
- Major emitters including the EU (2050), China (2060), and India (2070) now anchor their climate strategies around net zero targets.
- 49 nations have set their net zero targets in law (ECIU, 2025).
- Over two-thirds — almost 1,300 — of the world's 2,000 largest publicly listed companies in the world have net zero targets (Net Zero Tracker, 2025).
- More than 10,000 businesses, cities, regions, universities and financial institutions have also adopted net zero commitments, aligning with the UN's Race to Zero campaign.
- The Science-Based Targets Initiative show that, of the nearly 12,000 companies with targets or commitments, more than 9,000 are validated (SBTi, 2025).

Chart 10: Net zero target coverage, 2015-2025



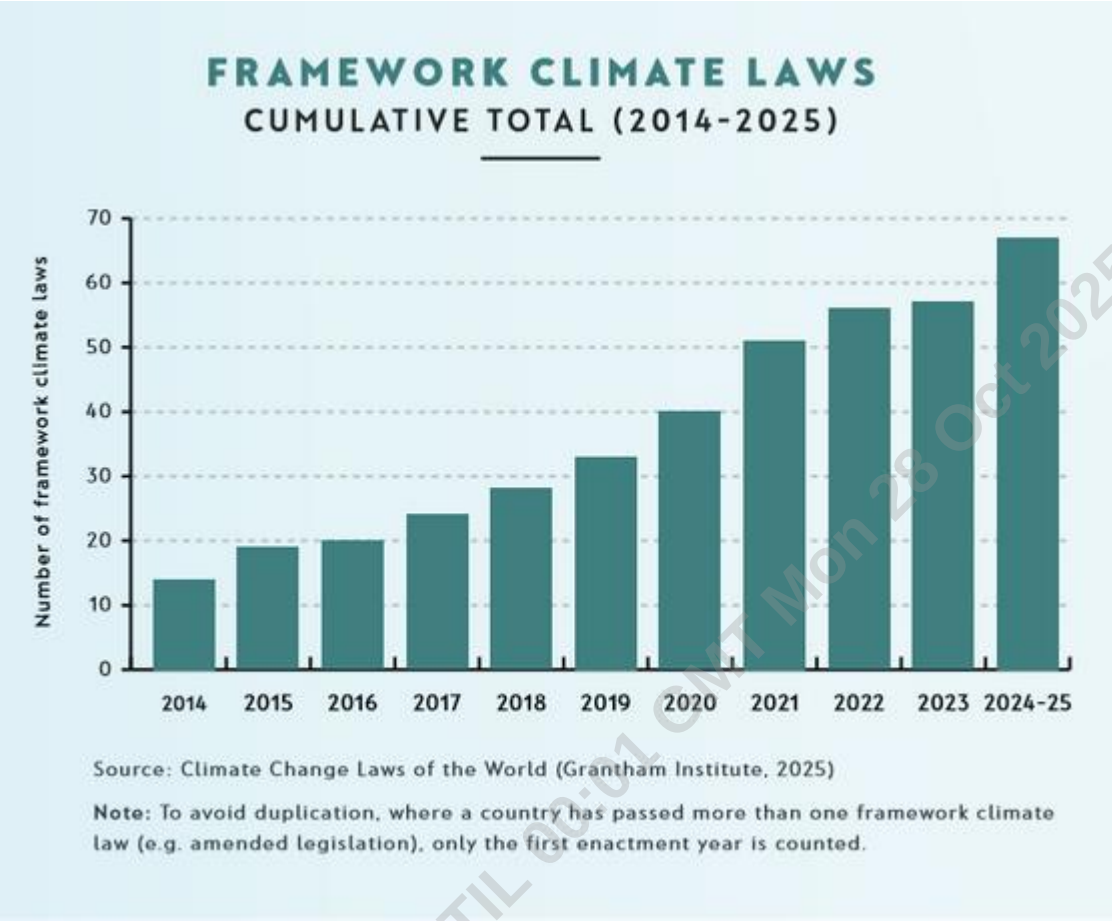
Source: Green et al (2024), Net Zero Tracker (2025)

National Climate Framework Laws

In 2015, only a handful of countries — notably the UK (2008) and Mexico (2012) — had comprehensive climate framework laws, cross-sectoral national laws to coordinate tackling climate change. Broader than individual sectoral or energy laws, each differs in scope but they generally set long-term climate goals (often including emission targets), address both mitigation and adaptation, establish governance mechanisms for delivery and mandate regular monitoring and reporting.

- Framework climate laws have expanded rapidly since 2015, with the number of countries adopting them more than tripling. This reflects a global shift from pledges to legally enshrined governance
- Nearly 70 countries have adopted framework climate laws, up from fewer than 20 a decade ago (Grantham Research Institute on Climate Change and the Environment, 2025a)
- The number of **national climate councils has tripled** — from 8 in 2015 to 26 in 2024 (*International Climate Councils Network, 2025*).

Chart 11: Framework Climate Laws – cumulative total, 2014-2025



Note: To avoid duplication, where a country has passed more than one framework climate law (e.g. amended legislation), only the first enactment year is included. Source: Grantham Research Institute on Climate Change and the Environment (2025a)

National legislation and policy

Framework climate laws can laws provide the scaffolding, but it is the detail in individual policies and pieces of legislation which ultimately drive action on climate. The Oxford Climate Policy Monitor's annual assessments demonstrate huge momentum in the adoption of ever more stringent climate policies and legislation around the world.

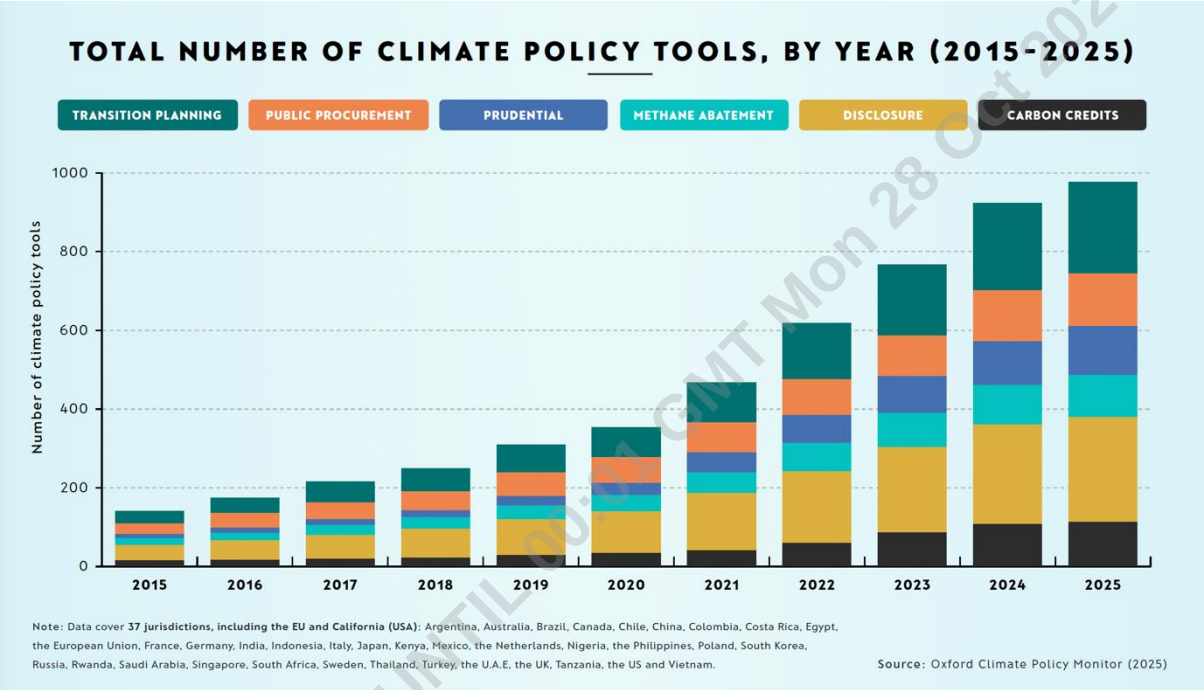
- National-level **climate policy tools have increased seven-fold since 2015** (Oxford Climate Policy Monitor, 2025).

- About **85% of tracked tools were introduced after the Paris Agreement**, and nearly 40% have come into force since 2022 — showing a sharp acceleration in recent years (Oxford Climate Policy Monitor, 2025).

- Compared with the pre-Paris era, the volume and stringency of climate regulation has surged, particularly in mandatory disclosure, transition planning, and procurement (Oxford Climate Policy Monitor, 2025).

- **19 of the G20** have some kind of mandatory requirement to disclose GHG emissions, and **16 of the G20** have mandatory rules to disclose physical and/or transition risk (Oxford Climate Policy Monitor, 2025).

Chart 12: Climate Policy tools by year, 2015 - 2025



Note: *Data cover 37 jurisdictions, including the EU and California (USA): Argentina, Australia, Brazil, Canada, Chile, China, Colombia, Costa Rica, Egypt, the European Union, France, Germany, India, Indonesia, Italy, Japan, Kenya, Mexico, the Netherlands, Nigeria, the Philippines, Poland, South Korea, Russia, Rwanda, Saudi Arabia, Singapore, South Africa, Sweden, Thailand, Turkey, the U.A.E, the United Kingdom, Tanzania, the United States and Vietnam.* ***Source:*** *Oxford Climate Policy Monitor (2025)*

Climate Litigation

Climate litigation has risen in parallel with the proliferation of policy and legislative tools, peaking in 2021, as citizens and civil society increasingly turn to the courts to hold governments and companies accountable for climate inaction. Since the Paris Agreement, the number of cases, jurisdictions, and strategic aims of litigation have all expanded dramatically (Grantham Research Institute on Climate Change and the Environment, 2025b).

- As of 2024, over **2,600 cases have been filed across 70+ countries**, with nearly 70% launched after 2015.
- Courts are increasingly issuing landmark rulings holding governments and corporations accountable for their contributions to climate change.
- Litigants are using diverse legal strategies — from human rights law to consumer protection, constitutional provisions and climate science — to press for action and integrity.
- New types of claims have emerged, including climate-washing, Indigenous people-led suits, corporate framework cases, and efforts to enforce Scope 3 emissions disclosure.
- 47 new climate-washing cases were brought in 2023, with over 70% decided in favour of plaintiffs.

Chart 13: Annual climate litigation cases, 2014 - 2024

Source; Grantham Research Institute on Climate Change and the Environment (2025b)

International standards

Since the Paris Agreement, a wave of international standards has helped turn climate ambition into actionable accountability. Disclosure, reporting, emissions accounting, and target-setting frameworks have matured and converged, making it easier for investors, regulators and companies to align with net zero.

Pre-Paris frameworks — such as the Global Reporting Initiative (GRI), CDP, and the International Integrated Reporting Framework (IIRF) — have undergone major updates that strengthened transparency, improved comparability, and aligned more closely with investor and regulatory needs.

Key developments include:

- The Task Force on Climate-related Financial Disclosures (TCFD) established in 2015 mainstreamed climate risk disclosure in corporate governance and financial filings, influencing regulators worldwide.

- The ISSB's IFRS S1 & S2 standards (launched in 2023) created a global baseline for climate-related and broader sustainability-related financial disclosures, consolidating the work of TCFD, SASB, and others under a single coherent framework.

- The ISO Net Zero Guidelines, launched in 2022 to build international consensus on what constitutes a science-aligned net zero pathway, have since laid the groundwork for a full ISO Net Zero Standard now under development. Once adopted, this standard will provide a globally recognised benchmark for what credible net zero action looks like — helping ensure verifiability, consistency and comparability in net zero targets and claims across the private sector.

- The Science-Based Targets initiative (SBTi) has become the de facto global authority for setting emissions reduction targets aligned with the Paris Agreement, now used by over 12,000 companies.

- Common tools such as the Greenhouse Gas (GHG) Protocol — currently undergoing its first major update since 2015 — and the Partnership for Carbon Accounting Financials (PCAF) enable more robust and consistent emissions tracking, particularly across the finance sector.

- The EU Sustainability Reporting Standards (ESRS), introduced in 2023 under the Corporate Sustainability Reporting Directive (CSRD), established legally binding sustainability disclosure requirements for large companies operating in the EU, including detailed reporting on climate change (ESRS E1). Together with the forthcoming Corporate Sustainability Due Diligence Directive (CSDDD) — which will require companies to identify and mitigate environmental impacts across their value chains — these measures mark a major step in embedding more accountability and transparency into private sector governance.

- Together, international standards are helping shift climate action from voluntary to verifiable and informing domestic regulations and policies so they are consistently applied globally.

International Shipping and Aviation

Recent progress reflects a significant shift in global climate governance — from limited sectoral oversight before 2015 to the emergence of concrete commitments, targets and implementation mechanisms. While international shipping and aviation remain outside the scope of the Paris Agreement, both now operate under sector-specific frameworks that are increasingly informed by its temperature goals. The International Maritime Organization (IMO) and the International Civil Aviation Organization (ICAO) each play central roles in aligning international transport with global climate objectives, even as enforcement and ambition gaps persist.

International Shipping

Since the Paris agreement was signed, significant shifts have taken place:

- In 2018, the IMO adopted its first Initial Greenhouse Gas Strategy, aiming to reduce total GHG emissions by at least 50% by 2050 (relative to 2008 levels), and to phase them out entirely this century.

- In 2023, the IMO revised its ambition with a strengthened strategy, now targeting net-zero GHG emissions "by or around" 2050, with indicative checkpoints for 2030 and 2040.

- Key measures under development include market-based mechanisms (MBMs) like a global levy or fuel standard, and a fuel lifecycle standard to incentivize low- and zero-carbon fuels.

Just weeks ahead of COP30 in Belém, the IMO's process faced a major setback — led by a coalition spearheaded by the United States and Saudi Arabia — which successfully secured a one-year delay to what would have been the world's first global carbon-pricing regime for shipping (*Reuters, 2025*). This came even though the Net Zero Framework (NZF) had already been approved by members of the IMO in April 2025. The episode underscores how geopolitics, fossil-fuel interests and disagreements over burden sharing continue to present significant risks to implementing climate ambition across global sectors.

International Aviation

Prior to Paris, like shipping, aviation emissions from international flights were managed independently via the ICAO. Since 2015:

- In 2016, ICAO adopted CORSIA (Carbon Offsetting and Reduction Scheme for International Aviation), the world's first global sectoral carbon pricing mechanism.
- CORSIA requires airlines to offset growth in international emissions above 2019. levels, starting with a pilot phase (2021–2023), followed by a first phase (2024–2026).
- Over 100 countries participate voluntarily, covering around 80% of global aviation emissions.
- In 2022, ICAO adopted a long-term global aspirational goal of net-zero carbon emissions by 2050 for international aviation, aligning the sector more closely with the Paris Agreement.

C: Science

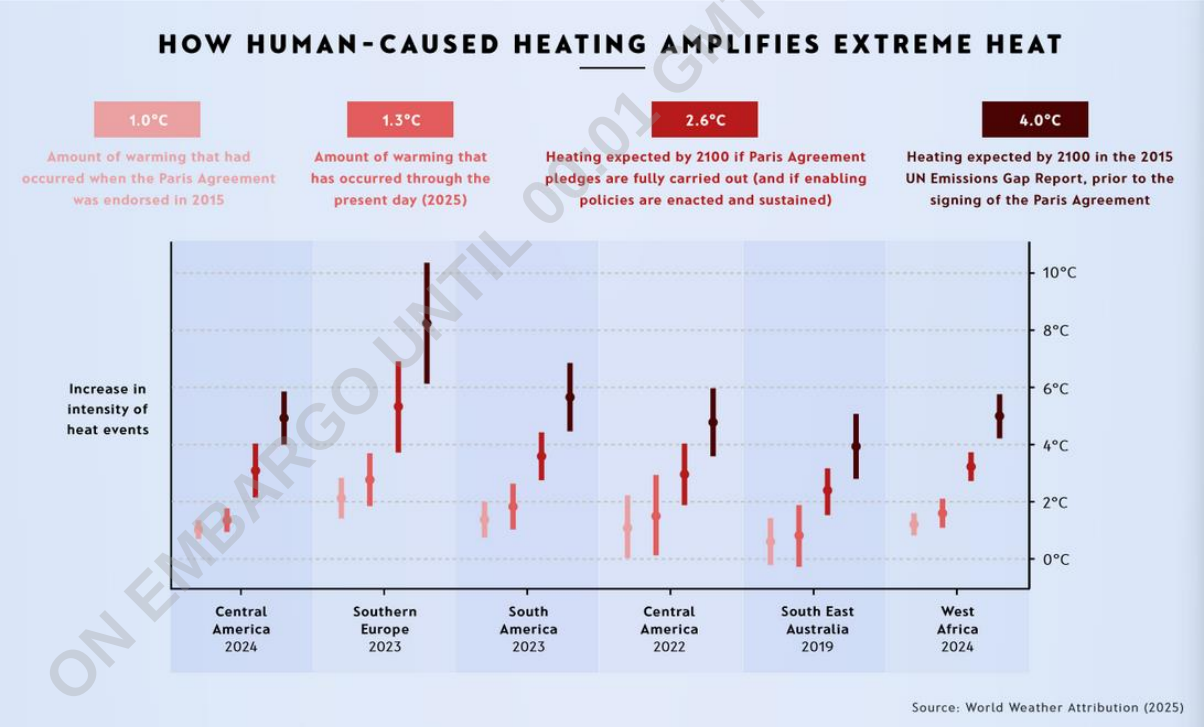
"We can very confidently now say that every heatwave that is occurring today has been made more intense and more likely because of climate change."

Dr Friederike Otto, 2022

Progress in the field of attribution science means that we can now be clearer than ever about the human-induced impacts of climate change on extreme weather, enabling the quantification of how global heating influences the likelihood and intensity of specific events.

- The record heatwaves around the world in 2023 "would have been virtually impossible to occur in the US/Mexico region and Southern Europe if humans had not warmed the planet by burning fossil fuels." (*World Weather Attribution, 2023*).

Chart 14: How human-caused heating amplifies extreme heat



Source: World Weather Attribution (2025)

D: Nature

Nature remains the poor relation in global climate action. Despite significant strides in raising the profile of nature-based solutions and the topic having come to be more central to negotiations on tackling and adapting to climate change, wildlife populations have plunged 73% since 1970 (WWF, 2024), and ecosystems continue to be degraded and lost. Many of the steepest losses are in Latin America — where COP30 will be held.

- Global emissions from land use and deforestation have declined from a 2015 high, settling at around 4 $GtCO_2$ a year (Global Carbon Budget, 2024). But as land-use emissions fall, agricultural emissions edge up (FAO, 2025)

- There are bright spots: Deforestation in the Brazilian Amazon fell to its lowest level in nine years in 2024 — down 50% since 2021, to around 6,500 km^2 — proof that focused policy and enforcement work (*National Institute for Space Research, 2025*)

- Since COP26, the UK has helped lead major nature initiatives:

    - The Glasgow Leaders' Declaration on Forests and Land Use (2021) — over 140 countries committed to halt and reverse forest loss by 2030.

    - The Global Ocean Alliance 30x30 (2022) — securing a global pledge to protect 30% of land and sea by 2030.

    - The High Seas Treaty (2023) — the first global framework to safeguard marine biodiversity beyond national waters.

Chart 15: Deforestation rates in the Brazilian Amazon, 2015 - 2024

Amazon deforestation in Brazil fell 31% in the year to July 2024, following a sharp decline since 2021. The drop reflects renewed enforcement under President Lula, including the reactivation of environmental agencies and crackdowns on illegal logging and land grabbing. Source: National Institute for Space Research, 2025

E: Emissions

In the decade prior to Paris, global CO_2 emissions were rising at a compounded annual growth rate of around 2%, far more quickly than would be compatible with the Paris aims to keep limit global heating to well below 2 degrees.

Previous ECIU analysis has used data for global CO_2 emissions from the Global Carbon Budget (*Global Carbon Budget, 2024*) and GHG emissions from Jones et al. (2024) collated and processed by Our World in Data. This dataset offers annual emissions timeseries for 255 global entities including nations, geographic regions and economic groupings; our analysis used annual data from 1990 to 2023, the most recent year available at time of publication.

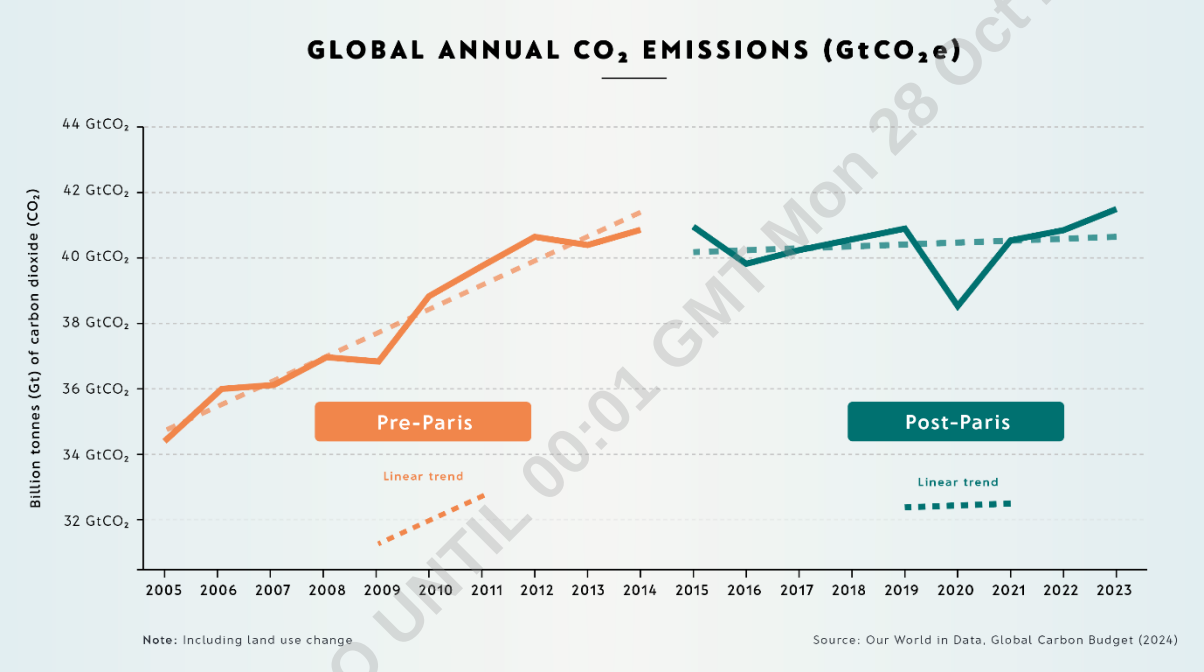
Comparing values from periods before and following the Paris agreement, we calculate the overall period growth (or decline) in emissions, in addition to compound annual growth rates (CAGRs) over those periods. CAGR values show the average annual growth rate of a variable over a defined number of years, accounting for the effects of

compounding; that is, growth is expressed as an average *rate* of change year-on-year, rather than assuming that growth (or decline) is linear.

- Since the Paris Agreement was signed in 2015, total greenhouse gas (GHG) emissions have grown by just 0.32% per year, less than one fifth of the annual rate observed in the decade before 2015 (2005-2014)

- CO_2 plateauing: Total annual CO_2 emissions grew by just 1.17% since 2015, a dramatic slowdown from nearly 18.4% growth in the decade before 2015

Chart 16: Global annual CO_2 emissions, 2005-2023



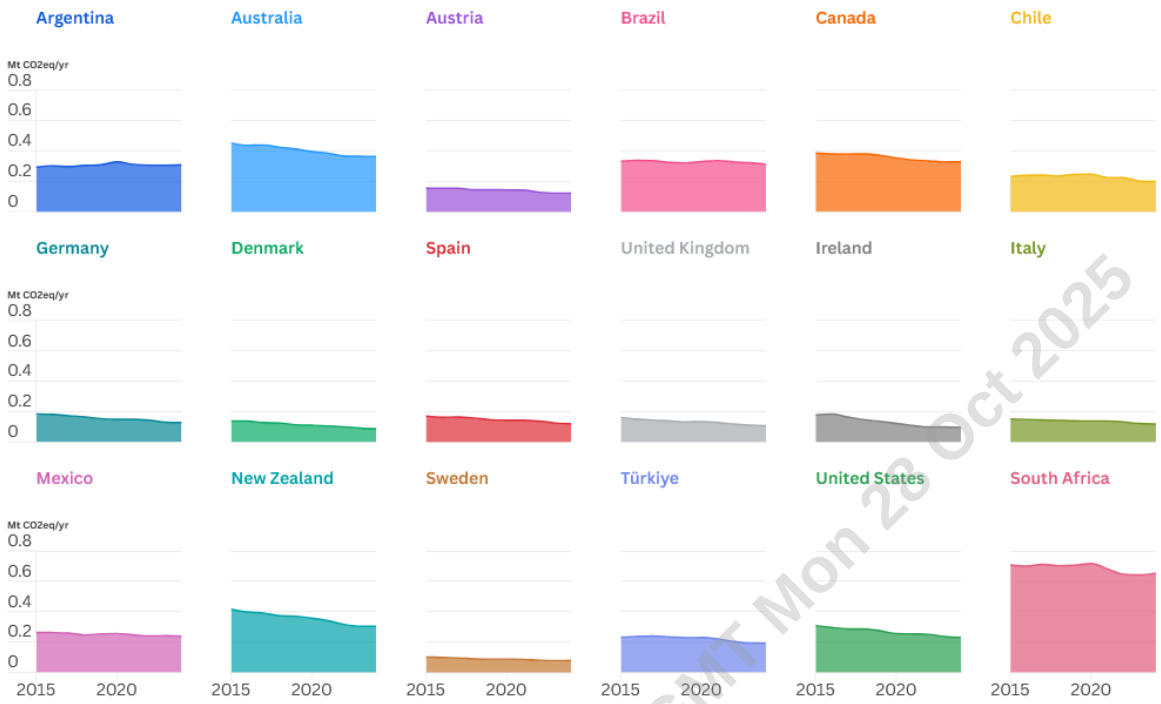
Note: *Including land use change.* ***Source:*** *Our World in Data (2025a), Global Carbon Budget (2024), ECIU Analysis*

- Among the 'Big Four' emitting territories (China, the US, EU and India), progress on emissions has differed but the direction of travel is towards slower growth and faster declines

- The US and EU have both have continued long-term declines; EU reductions have accelerated post-Paris, while the US has sustained drops despite political headwinds

- China's 10 year average emissions growth has plunged from 8% in the runup to Paris to below 2% today, with early signs of a possible peak (Carbon Brief, 2025b)

Chart 17: Greenhouse Gas Emissions per $ of GDP



Source: *Crippa et al., 2024*

F: Risk and Insurance

"Absent actions to mitigate climate change, policyholders will also feel the impact as pricing adjusts and cover is withdrawn. Insurers' rational responses to physical risks can have very real consequences."

Mark Carney (Bank of England, 2015)

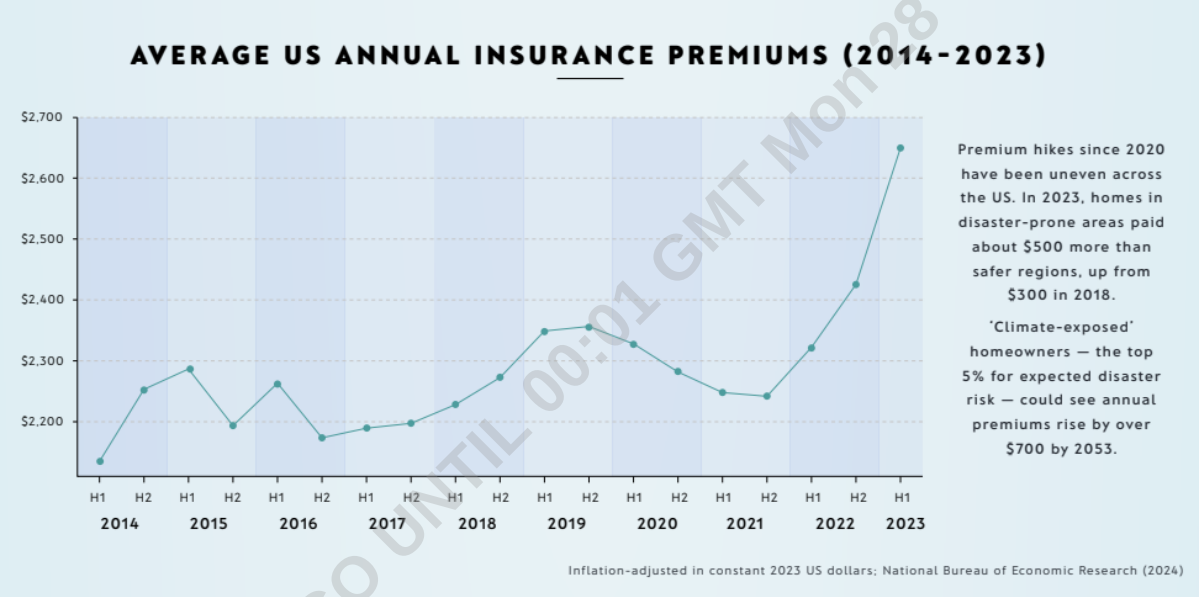
While rising insurance losses are not a marker of climate progress, they offer a revealing lens into how climate risk is being priced into the global economy — exposing where financial systems, investors and consumers are already adjusting to a hotter world. As extreme weather events become more severe due to climate change, populations around the world are feeling not just the direct effects of these events, but increasingly also bearing financial costs as insurance markets price in heightened risk. Rapidly rising premiums in areas prone to wildfires and coastal flooding are the canaries in the coalmine. We look at data from the US specifically to illustrate this trend.

- Average home insurance premiums in the US have risen over 30% since 2020, and in disaster-prone regions they're up nearly 50% — far faster than inflation (*Brookings Institution, 2024*).

- In the highest-risk US areas, premiums are now 80% higher than lower-risk areas — and still climbing as reinsurance costs grow and insurers retreat from coastal and fire-zone markets. (*National Bureau of Economic Research, 2024*)

- In California, major insurers have stopped renewing tens of thousands of home policies, while Florida and Louisiana lead the nation in non-renewals, up 280% and 267% respectively since 2018 (*United States Budget Committee, 2024*).

Chart 18: Average US annual insurance premiums, 2014-2023



Note: *Premium hikes since 2020 have been uneven across the US. In 2023, homes in disaster-prone areas paid about $500 more than safer regions, up from $300 in 2018. 'Climate-exposed' homeowners – the top 5% for expected disaster risk – could see premiums rise by over $700 by 2053. Inflation adjusted in constant 2023 US dollars.* ***Source:*** *National Bureau of Economic Research, 2024*

Conclusion

Ten years on from Paris, the clean energy transition is now a structural reality: renewable generation is close to outpacing electricity demand growth in many regions, emissions are steadily declining in advanced economies, climate policy is deeply embedded across policy, and new standards are verifying private sector action. The past decade has shown that technology, ambition and governance can shift faster than anyone thought possible. Progress, while still deeply uneven, is now measurable and irrefutable.

Still, progress needs to beget more progress. The projected 2.6˚C of heating by 2100 is far above safe limits, carrying unacceptable risks of tipping points and opening a Pandora's box of irreversible impacts. Moreover, the emerging benefits of the transition are not yet equitably shared. As a decade ago, developing nations still face major barriers to finance, technology and resilience, despite being the most exposed to the effects of climate change. The next decade must turn foundational progress into structural, equitable and sustained declines in global emissions — the true test of whether Paris can deliver on its promise of achieving net zero in the second half of the century in a way that supports sustainable development and poverty eradication.

The geopolitical tectonic plates have shifted in 2025. With the United States stepping back from global climate leadership under Trump, China is poised to step into the resulting vacuum — from global diplomacy to South–South finance to exporting clean tech manufacturing, and with signs that its own emissions may have peaked. But a stable climate depends on collective leadership: every major economy should rebuild trust in multilateral cooperation by aligning trade and investment with net zero goals, and by supporting developing countries with finance and technology transfer to help them leapfrog over fossil fuels to renewables-powered, competitive economies.

COP30 in Belém can consolidate progress, shape the next phase of global ambition and reaffirm that all countries must show their 'highest possible ambition' reflecting their 'common but differentiated responsibilities and respective capabilities.' The Brazilian Presidency's *Global Mutirão* can help close the gap on climate finance and nature protection, while aligning everyday priorities — such as food provision, energy security and dignified livelihoods — with global climate goals.

The lesson of the last decade is that policy and cooperation matter. The Paris Agreement sent a signal to every corner of the world: we can do this. The next ten years will decide whether the world can turn unstoppable clean energy momentum into enduring emission declines — a positive tipping point for current and future generations.

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