

Climate Update Report

Quarter 3, 2026 – July – September

A quarterly synthesis of the major events, science, policy and finance shaping the global response to climate change, with sources for further reading throughout.



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Editorial Summary

“Fossil fuel companies are banking windfall profits while everyday people foot the bill. Doubling down on oil and gas will only lock in vulnerability for decades. Fortunately, we have a way out. Because the crisis is accelerating – but so are the solutions. Renewables are the cheapest, fastest, and most secure source of new electricity almost everywhere.”

– António Guterres, UN Secretary-General, opening the UN Climate Summit at the General Assembly – September 23, 2026

Renewed war in the Gulf and a rapidly strengthening El Niño strained water, energy, and food systems through the summer. The U.S.-Iran ceasefire collapsed on 9 July after just 3 weeks, and both sides were reported to have struck power and desalination plants. In the Gulf and the wider region, water security now means the physical defense of desalination plants and power grids. That defense, and adherence to international humanitarian law on civilian water supplies, should be on the agenda of security talks and mediation between governments. So should the availability of mobile, decentralized emergency desalination capacity.

Energy importers bore the cost. With the Strait of Hormuz still closed, the IEA expects global oil supply to fall by 5.7 million barrels a day this year. Brent went back above \$100 a barrel in September, U.S. diesel passed \$200 a barrel, and European gas reached its highest price since early 2023. Qatar has extended force majeure on its LNG deliveries into the winter, leaving import-dependent economies in South Asia to compete for the cargoes that remain. Fertilizer is stuck behind Hormuz too, and African farmers are applying less of it. That the UN could still report hunger falling for a third straight year in 2025 says more about last year than this one.

The weather did not help. Since El Niño was declared in June, every month has either set a temperature record or ranked second-hottest. August was the warmest in NOAA’s 177-year record, and sea surface temperatures set a new high. The contiguous U.S. had its hottest month on record in July, and Europe’s fire season reached as far north as Britain, Germany, and the Netherlands. In Nepal, a glacier collapse on 26 August killed more than 1,100 people and took out a tenth of the country’s power capacity. Water was scarce before any of this. The WMO found 2025 was one of the driest years for river flows in 35 years, with groundwater deficits across the Middle East. NOAA now puts the chance of a very strong El Niño this winter at better than 90%.

High prices have hastened the shift to electricity. In August, electric car sales rose 36% in Europe and nearly doubled in markets outside China, Europe, and North America, and in September China set a target of 70% electric car sales by 2030. IRENA found more than 90% of new renewable capacity was cheaper than the cheapest fossil alternative, and development banks delivered a record \$163 billion in climate finance. Oman signed agreements for the 500 MW Al Kamil solar project and the 2 GW Jabal Abyad pumped hydro scheme, set to be the largest hydroelectric plant in the Middle East. Demand from AI is pulling the other way. In the U.S., 99 gas plants proposed for data centers could raise power sector emissions by as much as 20%. Carbon removal and green hydrogen fared worst. Microsoft cut its removal purchases by 80%, and green hydrogen still lacks buyers at a price that works.

Diplomacy made little headway. India rejected a 31 August arbitration award upholding the Indus Waters Treaty within hours, and the Colorado River states missed their deadlines as Lake Mead fell to a record low. UNCCD COP17 in Ulaanbaatar ended without agreement on a global drought framework. The loss and damage fund, holding \$350 million against \$2.8 billion in requests, put off its first approvals until December, and the International Seabed Authority deferred its mining code to 2027. The UN Climate Summit produced no collective commitment, and BRICS leaders reaffirmed the Paris

Agreement while declaring that fossil fuels will still play an important role. One advance came at the UN General Assembly, which adopted its first declaration on sea-level rise.

Emissions have yet to fall. Climate TRACE put July's at 4.9 billion tons, 0.1% above a year earlier. COP31 opens in Antalya on 9 November under the first split presidency in the history of the talks, and the IMO votes on a carbon price for shipping on 4 December. Delegates will arrive with the bill for loss and damage largely unpaid and their own energy bills higher than a year ago.

Key Events

- Heads of Delegation Retreat on the road to COP31 — Shamakhi, Azerbaijan. 22-23 July. *Co-hosted by the COP29 and COP31 Presidencies*
- UNCCD COP17 — Ulaanbaatar, Mongolia. 17-28 August. *No agreement on a global drought framework, \$1.3 billion land and drought finance package announced*
- World Water Week — Stockholm, Sweden. 23-27 August
- 18th BRICS Summit — New Delhi, India. 12-13 September. *New Delhi Declaration adopted*
- Climate Week NYC — New York, U.S.A. 20-27 September
- UN Climate Summit 2026, UNGA 81 High-level Week — New York, U.S.A. 23 September
- UNGA High-level Meeting on Sea-Level Rise — New York, U.S.A. 24 September. *First UN declaration on sea-level rise adopted*

Key Reports

- Lazard — [Levelized Cost of Energy+](#), July
- FAO, IFAD, UNICEF, WFP, WHO — [The State of Food Security and Nutrition in the World 2026](#), July
- IEA — [Electrification](#), September
- IEA — [Modernising Grids in the Age of Electricity](#), September
- WMO — [State of Global Water Resources 2025](#), September

Report Highlights

Electrification

- Electricity supplies 23% of global final energy consumption today. The IEA finds it is already cost-effective to raise that to around 33%, close to the 35% by 2035 goal proposed by the COP31 Presidency, although today's policy settings deliver only about 30% by 2035
- Transport has the greatest potential, with around half of oil-based road transport demand competitive to electrify today, alongside half of global space heating and about 40% of low- and medium-temperature industrial heat. Energy importers gain most, with cost-effective potential adding almost 15 percentage points in Europe against 5 in the Middle East
- Electric vehicles already avoid around 2.3 mb/d of oil demand, more than the volume that bypassed the Strait of Hormuz through the UAE's Habshan-Fujairah pipeline in summer 2026. In the High Electrification Scenario importers cut their fuel import bills by about a quarter by 2035, or USD 400 billion a year, and 25 countries have announced new electrification policies since February 2026
- Electrification cuts end-use emissions by 40% by 2035 in the scenario, but it requires grids to expand 40% faster than over the past decade, electricity demand growth of 1,400 TWh a year,

nearly twice the recent pace, and a threefold rise in end-use investment to around USD 1 trillion by 2035

Lazard's Levelized Cost of Energy+ 2026

- Unsubsidized renewables remain the lowest-cost new-build generation in the U.S., with utility-scale solar at \$40 to \$98/MWh and onshore wind at \$37 to \$99/MWh, against \$51 to \$129/MWh for gas combined cycle and \$175 to \$255/MWh for new nuclear
- Costs rose year over year across every technology on higher capital costs, sustained interest rates, tariff pass-through and supply chain repricing. Gas combined cycle costs are at a 15-year high with turbine supply constrained, and recent quotes of \$2,400 to \$2,600/kW point to further increases
- Storage costs increased, reversing last year's decline, as tariffs on lithium-ion battery imports cut access to low-cost Chinese cells. This is a U.S. result and contrasts with IRENA's finding that global battery storage costs fell by close to 30% in 2025
- Higher new-build costs have improved the economics of existing plants. The report adds illustrative costs for nuclear restarts (around \$71/MWh), small modular reactors (around \$214/MWh) and new geothermal (around \$107/MWh), finds renewables broadly competitive with gas even after firming costs, and calls for faster permitting to meet demand growth

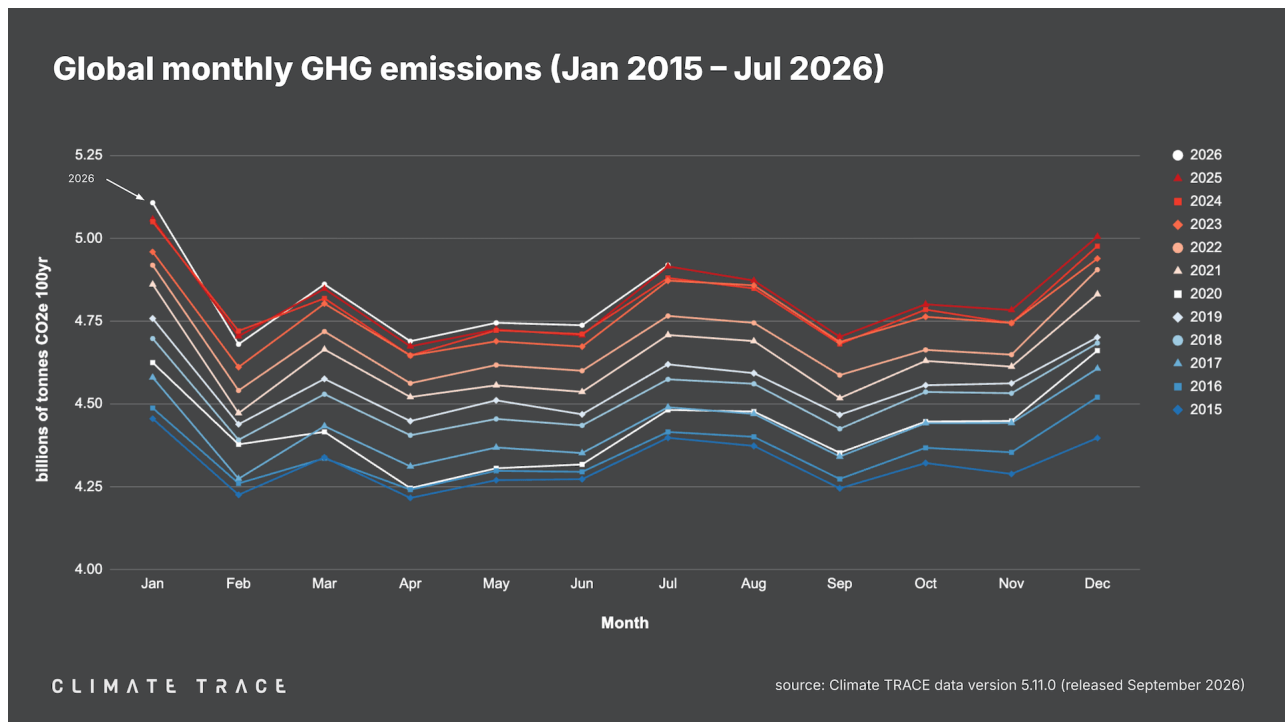
State of Global Water Resources 2025

- 2025 was one of the driest years for river discharge in 35 years, with about 36% of global catchment area drier than normal and only 36% in the normal range. The share of basin area under normal conditions has been below the historical mean in each of the past 7 years
- The Middle East had persistent dry conditions throughout 2025, with below-normal precipitation all year, drought developing from March to August, and below-normal river discharge, reservoir inflows and reservoir storage. Groundwater deficits have persisted in the region since 2022, with over-abstraction identified as a driver
- All major glaciated regions lost mass for a fourth consecutive year, with cumulative global glacier loss of 1,400 Gt between 2023 and 2025. Some small-glacier regions, including the European Alps, Scandinavia and the Caucasus, may already have passed "peak water"
- Terrestrial water storage declined persistently in 2014 to 2016. Asia and Africa accounted for nearly half of water-related extreme events and more than 80% of associated deaths over the past 5 years, yet supply only 7.1% of the river discharge stations available to the report

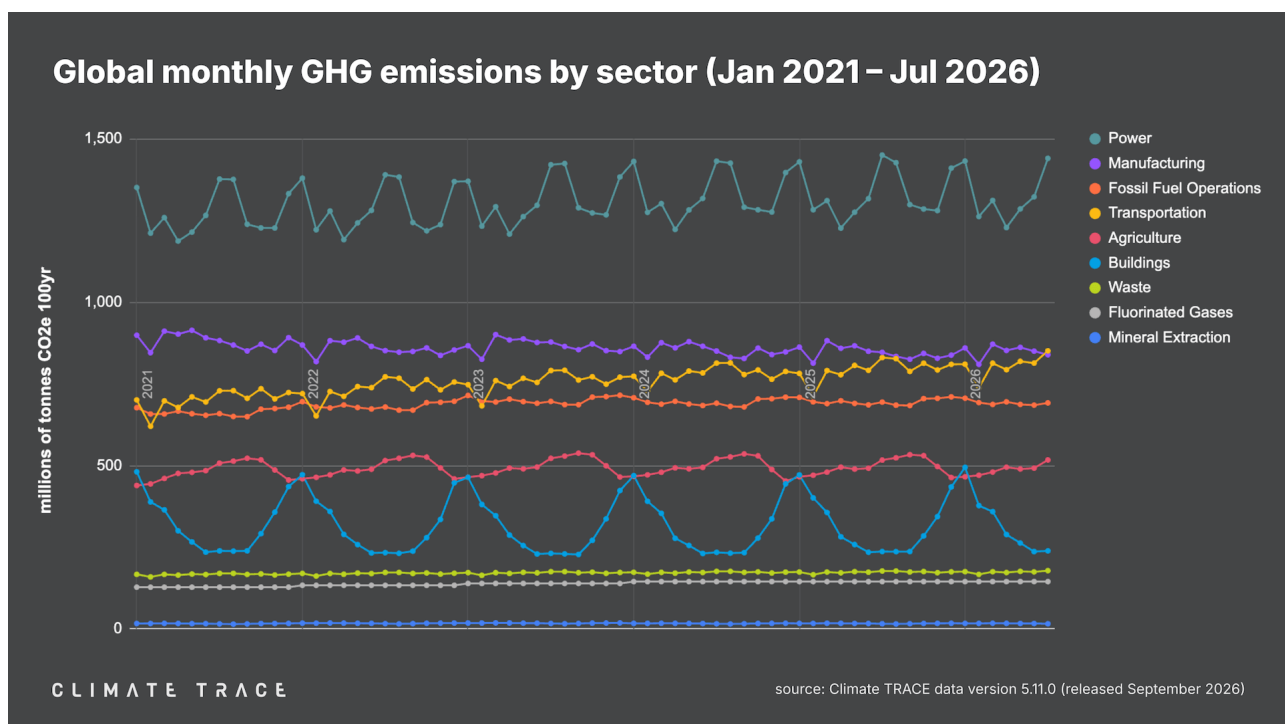
The State of Food Security and Nutrition in the World 2026

- Hunger fell for a third consecutive year to 645 million people, or 7.8% of the world population, in 2025, some 14 million fewer than in 2024 but about 50 million more than in 2015. Moderate or severe food insecurity affected 2.1 billion people, 86 million fewer than a year earlier
- Africa remains the exception, with 1 in 5 people facing hunger against 6.0% in Asia and 4.8% in Latin America and the Caribbean. Two-thirds of Africans (66.6%) cannot afford a healthy diet, and that share is rising while it falls in every other region
- The cost of a healthy diet, this year's theme, rose to 4.28 PPP dollars a day in 2025 from 3.44 in 2021, and is highest in Latin America and the Caribbean at 4.91. Some 2.69 billion people could not afford one, down from a peak of 3.13 billion in 2020 as incomes rose faster than food prices
- Between 510 and 520 million people are still projected to face hunger in 2030, 56% of them in Africa, and the report warns that the 2026 Middle East conflict threatens progress through its impact on Africa and Asia. Its modeling finds productivity gains in fruits and vegetables do most to lower diet costs, while subsidies for starchy staples bring negligible benefit

Carbon Emissions Data



[Climate TRACE](#) reported that GHG emissions for the month of July 2026 totaled 4.9 billion tons CO₂e. This represents an increase of 0.1% vs. July 2025. Total global year-to-date emissions are 33.7 billion tons CO₂e. This is 0.3% higher than 2025's year-to-date total for the same time period. Global methane emissions in July 2026 were 30.8 million tons CH₄, an increase of 0.1% vs. July 2025.



By city, the largest year-over-year increases were in Beijing and Jinan, China, Los Angeles, U.S., and Nagpur and Chennai, India, and the largest declines in Detroit, New York and Chicago, U.S., Dubai, UAE, and Anshan, China. Both progress and setbacks are visible among the largest emitting nations.

Global Temperature Records

Since being declared in June, El Niño has strengthened rapidly and pushed global and ocean temperatures to new records. Every month has either set a temperature record or ranked second-hottest on record. By the end of the summer the Niño-3.4 region of the Pacific was +1.8°C above normal. [NOAA](#) now gives a greater than 90% chance of a very strong El Niño this winter, and a 75% chance it peaks above +2.5°C, which would exceed every event since 1950.

Hottest on Record	1st		2nd		3rd	
January	2025	+1.31°C	2024	+1.30°C	2020	+1.18°C
February	2024	+1.40°C	2016	+1.31°C	2025	+1.22°C
March	2025	+1.32°C	2026	+1.31°C	2024	+1.31°C
April	2024	+1.26°C	2025	+1.20°C	2020	+1.13°C
May	2024	+1.15°C	2026	+1.07°C	2025	+1.06°C
June	2024	+1.18°C	2026	+1.09°C	2023	+1.07°C
July	2026	+1.18°C	2024	+1.18°C	2023	+1.16°C
August	2026	+1.32°C	2024	+1.24°C	2023	+1.24°C
September	2023	+1.40°C	2026	+1.33°C	2024	+1.21°C
October	2023	+1.37°C	2024	+1.34°C	2025	+1.23°C
November	2023	+1.43°C	2024	+1.33°C	2025	+1.18°C
December	2023	+1.39°C	2024	+1.30°C	2019	+1.13°C

April '26: +1.12°C #4 | February '26: +1.18°C #5 | January '26: +1.12°C #5

Climate Security Nexus

Water Security

- Iran struck Kuwaiti power and desalination plants on 4 consecutive days from 17 July, 8 days after the [collapse of the U.S.-Iran ceasefire](#) on 9 July. Kuwaiti authorities said the first strikes damaged [a large number of power generation units](#) and started a fire, and activated emergency contingency plans. By 21 July [further attacks](#) had forced several generating units out of service, and the UAE condemned them as a flagrant violation of sovereignty. Kuwait draws about 90% of its drinking water from desalination, and most Gulf plants are co-located with power stations, so a strike on generation is also a strike on water supply. A 2010 CIA assessment cited in AP reporting found that more than 90% of the Gulf's desalinated water comes from just 56 plants. The strikes confirmed water infrastructure as an operational target in the war, and [Bloomberg](#) and [France 24](#) both framed desalination as the Gulf states' most exposed strategic asset.
- The Court of Arbitration under the Indus Waters Treaty ruled in an [award published on 31 August](#) that the 1960 treaty “remains fully in force” and that India must observe its obligations. The Court rejected each of India's grounds for holding the treaty in abeyance, including material breach, fundamental change of circumstances and armed conflict, and barred India from raising the dam wall and power intake of the Rattle hydroelectric project above set levels until 90 days after the Neutral Expert's final decision. India [rejected the ruling within hours](#), calling the court illegally constituted and maintaining the abeyance it declared in April 2025, as it had with a supplemental award on pondage in May. At the UN General Assembly on 25 September, Prime Minister Shehbaz Sharif warned that any diversion of Indus waters “[will be treated as an act of war](#)”. The treaty is the principal institutional check on water between two nuclear-armed states, and a legal victory that one party refuses to recognize leaves it weaker as a governing instrument even as the award strengthens Pakistan's position.

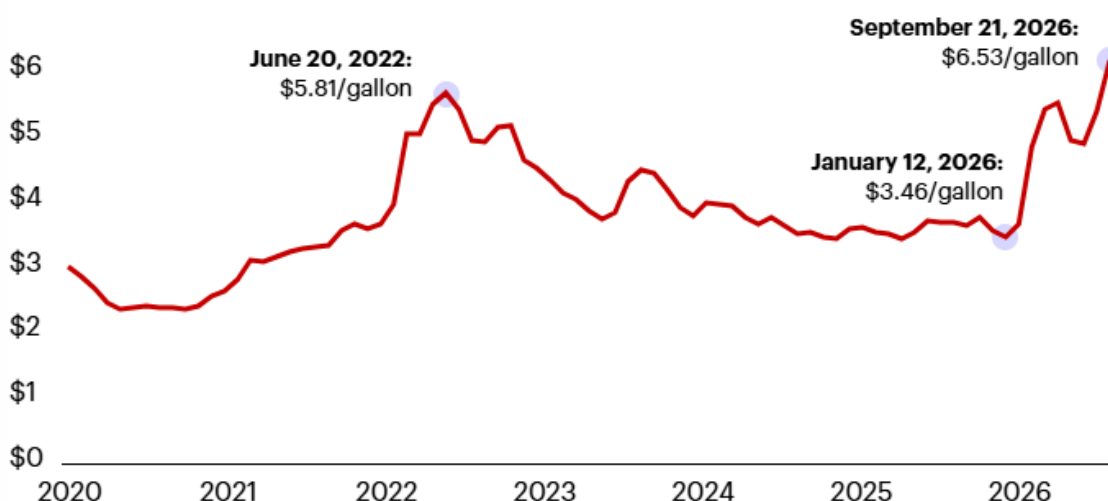
- Lake Mead fell in early August to its [lowest level since the reservoir was filled](#) some 90 years ago, after the worst snowpack on record across the Colorado River Basin, with Lake Powell at its lowest in nearly 7 decades. On 4 August the federal government set out a [plan imposing steep cuts](#) on Arizona, California and Nevada for 2027 and 2028, after the seven basin states missed repeated deadlines to agree rules to replace guidelines that expire in 2027. Arizona faces the largest reduction at 760,000 acre-feet. California's commissioner, JB Hamby, said the river “no longer reliably produces enough water to support all the uses and expectations built around it.” Some 40 million people across seven states, tribal nations and Mexico depend on the river, and the failure of its states to reach agreement shows that shared-water governance under climate stress breaks down even in a wealthy federation with a century-old compact.

Energy Security

- The collapse of the ceasefire on 9 July reversed the partial recovery of fuel prices in Q2. The IEA's [September Oil Market Report](#) from 11 September found more than 10 mb/d of Gulf output still shut-in and Gulf crude exports at roughly half their pre-war level. Dated Brent reached \$113.48 a barrel on 9 September and Brent futures stood near \$105, up \$21 since the start of August. The agency now expects global oil supply to fall 5.7 mb/d this year to 100.7 mb/d and demand to contract by 2.5 mb/d, with Gulf production recovery deferred to 2027. U.S. diesel prices passed \$200 a barrel in early September, 94% above pre-war levels, and observed global inventories have drawn 507 million barrels since February. At the pump, U.S. retail diesel [passed \\$6.50 a gallon](#) in September, above the previous record of \$5.81 set in June 2022. At the end of Q3, [indirect talks mediated by Qatar](#) on the sidelines of the General Assembly had stalled, with Iran offering to reopen Hormuz within 7 days in exchange for an end to the U.S. naval blockade and sanctions relief, and Washington insisting on a comprehensive deal covering the nuclear file.
- Gas markets also tightened. European TTF front-month prices settled at \$20.91/MMBtu on 22 July, the [highest close since January 2023](#), and Asian spot LNG jumped to \$22/MMBtu, while EU storage stood at 54.4% full with injections running below the 5-year average. On 28 September QatarEnergy [extended force majeure](#) on deliveries into November and early December for buyers including Pakistan, Bangladesh, India and Italy's Edison, with Ras Laffan operating at reduced capacity. Hormuz carried about a fifth of global LNG supply last year. The burden falls hardest on import-dependent economies in South Asia, which lack the storage and purchasing power of Europe and Northeast Asia and enter the northern winter competing for scarce cargoes at prices last seen in 2022.

National average retail price for No. 2 diesel

— Monthly diesel price (\$/gallon)



Food Security

- Global hunger fell for a third consecutive year, according to [The State of Food Security and Nutrition in the World 2026](#), launched in Rome on 21 July. An estimated 645 million people, or 7.8% of the world's population, faced hunger in 2025, down 14 million on 2024, and 2.1 billion experienced moderate or severe food insecurity. Africa remains the outlier, with 309 million hungry people, a fifth of its population. The cost of a healthy diet rose to \$4.28 a day in purchasing-power terms, up from \$3.44 in 2021, leaving 2.69 billion people unable to afford one. The report warns that the energy and fertilizer price shock from the Middle East conflict is feeding food inflation, which puts the gains of the past 3 years at risk before they are consolidated.
- The fertilizer shock is now a supply problem as well as a price problem. The IFDC's [Fertilizer Crisis Response Bulletin](#) of 22 September reports fertilizer shipments through Hormuz effectively at a standstill and the Bab al-Mandeb alternative threatened after Houthi forces seized the Hanish Islands and the port of Mokha. Urea prices have eased toward pre-war levels, but phosphate supply remains tight, DAP imports from January to July ran about 23% below 2025, sulfur prices have doubled since January, and African farmers report cutting application rates and planted area.
- El Niño is also strengthening. NOAA's [ENSO update](#) of 10 September gives a greater than 90% chance of a very strong El Niño this northern winter and a 75% chance that it exceeds any event since 1950. The WMO's seasonal update of 8 October projects the event could peak at 3.7°C above normal in the final quarter of the year, beyond the 2.6°C record set in 2015-16, and it is [already disrupting crops](#), with heavy rain leaving Brazilian sugar cane unharvested and threatening next year's arabica coffee, while drought intensifies fires in Indonesia, the largest palm oil producer. [WRI](#) maps elevated drought risk across southern Africa, India, Indonesia, the Philippines, Australia and Central America, and the WFP estimates an additional 49 million people could fall into acute food insecurity by the end of 2027.

Climate Diplomacy

- Secretary-General António Guterres convened the [UN Climate Summit 2026](#) at UN Headquarters on 23 September, during the High-level Week of the 81st General Assembly and alongside Climate Week NYC, with the message that the world “must match an accelerating crisis with accelerating action.” The summit was organized around six Solutions Dialogues on oceans, the energy transition, adaptation finance, methane, information integrity and green industrialization, and Guterres announced new initiatives on clean energy, critical minerals and early warning systems ahead of it. In his remarks he said that [“emissions are still rising when they must plummet, and fossil fuel expansion continues.”](#) The summit has no negotiating mandate and produced no collective commitment, which leaves the gap between national pledges and the 1.5°C pathway for Antalya.
- Preparations for COP31 tested the first split presidency in the history of the process. Heads of delegation met at a [retreat in Shamakhi](#), Azerbaijan on 22 and 23 July, co-hosted by the COP29 and COP31 Presidencies, the first such meeting under the dual arrangement between Türkiye as host and Australia as President of Negotiations. On 10 September in Trabzon, COP31 President-Designate Murat Kurum said that [“the final decision lies with the presidency of COP31”](#), while Australia's Chris Bowen said the two countries were working together seamlessly. The agreed modalities give Australia exclusive authority over the negotiations and require consultation if the two disagree. The COP30 Presidency's [roadmap on transitioning away from fossil fuels](#), whose elements were presented in Bonn in June, is due to be finalized

before Antalya, and how the two presidencies handle it will show whether the arrangement works.

- BRICS leaders meeting in New Delhi on 12 and 13 September unanimously adopted the [New Delhi Declaration](#), reaffirming the Paris Agreement, prioritizing adaptation, and backing the Tropical Forest Forever Facility and cooperation on carbon markets in developing economies. The same text states that [“fossil fuels will still play an important role in the world’s energy mix”](#), and President Xi Jinping told the summit that the global South “must improve global climate governance.” The bloc accounts for more than half of global greenhouse gas emissions. The declaration signals the position the largest emitting bloc will take into Antalya, pairing support for the Paris framework with an explicit role for fossil fuels.
- Shipping’s global carbon price returns to a vote on 4 December, a year after member states voted 57 to 49 to adjourn adoption of the [IMO Net-Zero Framework](#). An intersessional working group continued technical work on implementation guidelines through Q3 to narrow outstanding differences. Analysis from UCL’s shipping research group found that by the April to May session a majority of member states had returned to backing the framework broadly as approved in 2025. The United States remains the leading opponent, citing a sizable bloc opposed with no prospect of consensus, while Saudi Arabia, Russia, Algeria, Bahrain, Iraq, Kuwait and the UAE insist any framework must be consensus-based. If adopted, it would be the first binding emissions pricing mechanism applied to an entire global industry.

Climate Resilience

- A glacier collapse on the north face of Langtang Lirung on 26 August sent an ice and rock avalanche and debris flow down the Bhotekoshi and Trishuli valleys along the Nepal-Tibet border. By 2 September Nepal had confirmed [1,114 deaths with 3,916 people still missing](#), and China reported 16 dead and 546 missing on the Tibetan side. The U.S. Geological Survey traced the flood to the glacier collapse and the landslide it set off, and [Nature](#) reported scientists’ warnings that warming is destabilizing high-altitude terrain and could make such events more frequent. [TIME](#) reported 15 hydropower plants affected and some 753 MW knocked out, roughly 11% of Nepal’s generating capacity, with hundreds of plant workers among the missing. The disaster shows how much of the Himalayan region’s water and energy infrastructure sits in the valleys most exposed to cryosphere hazards, and COP31 President-Designate Murat Kurum has since named [support for Nepal’s recovery](#) through the loss and damage fund among the presidency’s priorities.
- July 2026 was the [hottest month on record for the contiguous United States](#), NOAA reported, at an average of 76.9°F, 3.3°F above the twentieth-century average, breaking a record that had stood since July 1936. Overnight minimums averaged 64.2°F, the warmest on record for any month, and drought covered roughly 48.5% of the contiguous states. The Texas grid set back-to-back demand records on 21 and 22 July, and on 18 August Ercot [forecast demand above its 91.1 GW record](#) on each day from 20 to 24 August, with temperatures up to 105°F in Dallas, just as wind output was expected to fall by as much as 5 GW. Solar and battery storage helped the grid meet earlier peaks with more than 20 GW in reserve. Nighttime heat matters most for resilience planning, since it removes the overnight recovery on which human health depends and keeps cooling demand, and therefore power and water demand, elevated around the clock.
- Europe’s fire season spread north. By early August the EU’s burned area had reached [489,826 hectares](#), 13% above the 14-year average, with Spain accounting for 185,948 hectares and France recording its worst year on record at 99,092. The United Kingdom had its worst year in 15 years, Germany nearly doubled its average and the Netherlands burned almost 5 times its usual area. Copernicus mapping of July and August identified [more than 1.2 million hectares affected](#) across southern Europe, the Balkans, Ukraine and Algeria, including 19 fires of more

than 10,000 hectares each. As Professor Simone Varotto put it, “fire risk is no longer confined to the Mediterranean,” which means northern European countries with little firefighting capacity or land management tradition for fire now need to build both.

Decarbonization

- The European Commission published its [review of the EU Emissions Trading System](#) on 17 July, setting out how the carbon market will deliver the 90% net reduction by 2040 now written into the European Climate Law. The proposal sets a linear reduction factor of 3.7% for 2031 to 2035, falling to 1.7% from 2036, and makes all free allocation from 2031 conditional on operators submitting a verified decarbonization investment plan, with 20% withheld until reductions are demonstrated. It creates an Industrial Decarbonisation Bank holding 400 million allowances from 2028, brings in waste incineration and more of aviation and shipping, and reintroduces 15% of phased-out free allowances in CBAM sectors from 2028, extending the phase-out to 2038. The package tightens conditions on industry while easing the pace, a trade-off that reflects the pressure of the energy crisis on European manufacturers. Legislative agreement is targeted for early 2027.
- China's CO₂ emissions fell 1% in Q2, according to [CREA analysis for Carbon Brief](#) from 2 September, the first decline driven mainly by oil. Oil demand dropped 9%, with 16% from transport, as the Hormuz crisis cut imports by 32% and electric vehicles displaced an estimated 19 million tons of oil over the same period, half as much again as a year earlier. Coal power still rose 2.4%, leaving first-half emissions marginally above 2025. On 11 September nine government departments issued a [five-year plan for new energy vehicles](#) targeting 70% of passenger car sales and 40% of commercial vehicle sales by 2030. Electric vehicles already make up more than 60% of passenger car sales, so the passenger target formalizes a shift that is largely underway, while the commercial vehicle target reaches into freight, where oil demand is harder to displace.
- The oil shock is accelerating electrification outside China. Global electric vehicle sales reached [1.83 million in August](#), according to Rho Motion, up only 2% on a year earlier because Chinese domestic sales fell 11%. Europe rose 36% to 380,000, with France reaching a record 41% share of new car sales, and sales in the rest of the world, outside China, Europe and North America, nearly doubled to 290,000. North America fell 33% against a 2025 base inflated by buyers rushing ahead of the expiry of federal tax credits. Chinese electric vehicle exports rose more than 150% to about 518,000 units. Import-dependent economies facing diesel and gasoline at crisis prices are turning to electric transport to reduce their exposure, and Chinese manufacturers are supplying most of that demand.
- Data center developers in the U.S. are building dedicated natural gas plants to get power faster than grid connections allow. [Ninety-nine proposed plants](#) tracked by BloombergNEF, totaling 126 GW across 22 states, would emit about 318 million tons of CO₂ a year at industry-standard utilization, enough to raise U.S. power sector emissions by 20%, and by as much as a third if run continuously. More than a third of the projects are in Texas, including plants for Amazon in Pecos County and for Microsoft, built by Chevron, that together could exceed 10 GW and emit up to 45 million tons a year, though both companies say their climate goals are unchanged. Disclosure is thinning as the buildout accelerates. OpenAI, Anthropic and SpaceX have [published no emissions figures or net-zero targets](#), and ESG-focused funds lost \$82 billion in 2025 after attracting about \$485 billion in 2021. California's SB 253 will require Scope 1 and 2 reporting from companies with more than \$1 billion in revenue from November, but the AI developers may be able to class rented data center emissions as Scope 3, which is not required until 2027.

Renewable Energy

- IRENA's [Renewable Power Generation Costs in 2025](#), published in July, found that more than 90% of newly commissioned utility-scale renewable capacity produced power more cheaply than the cheapest new fossil fuel alternative. The global weighted average cost of electricity was \$44/MWh for solar PV, \$33/MWh for onshore wind and \$78/MWh for offshore wind. The installed cost of 4-hour utility-scale batteries fell by close to 30% in 2025 to around \$140/kWh, some 95% below 2010. IRENA estimates that renewables deployed worldwide avoided about \$480 billion in fossil fuel costs and 8.4 gigatons of CO₂ in 2025. Falling storage costs are the more significant finding, since they address the intermittency objection that has been the main argument against a power system built on wind and solar.
- The 4 July deadline for U.S. wind and solar projects to begin construction, or else be in service by the end of 2027, to keep federal tax credits drove a rush in utility-scale development. SEIA's [Solar Market Insight Q3 2026](#) reports 11.4 GWdc installed in Q2, up 45%, with utility-scale up 61%, and a safe-harbored pipeline of 216 to 240 GWdc that can qualify through 2030. Solar and storage accounted for 70% of new generating capacity in the first half, yet SEIA expects annual additions to stay flat at about 44 GWdc through 2031 as permitting and interconnection constrain growth. EIA data showed wind and solar reaching [20% of U.S. generation in the first half](#), up 10% to nearly 420 TWh, while coal fell 10%. On nuclear, the Department of Energy announced on 1 July that [three advanced microreactors](#) had reached criticality under its Reactor Pilot Program, meeting the 4 July target set by executive order.
- China's solar installations slowed sharply after the 2025 rush. The country added [86.15 GW from January to July](#), down 61% on the same period last year, when developers raced to connect projects ahead of the shift to market-based pricing, though July additions of 14.08 GW were up 28% and cumulative solar capacity reached 1,290 GW. Forecasts for the full year range from 160 to 200 GW, against 315 GW in 2025. Clean energy investment in China fell 36% to \$294 billion in the first half, and its share of global cleantech investment dropped from 52% to 39% between Q4 2025 and Q2 2026, according to [Carbon Brief](#). On current forecasts the world's largest market will add less solar in 2026 than in any year since 2022, which will slow global additions even as installations elsewhere grow.
- Grid integration is now China's main constraint on clean power. Official figures show about 9% of wind and solar output was curtailed in the first half of 2026, and CREA estimates China could have generated an extra 401 TWh in those 6 months, nearly as much as Spain and the Philippines produce in a year. BloombergNEF puts the grid investment China needs through 2049 at \$3.9 trillion, more than a quarter above what is expected in Europe or the U.S. Battery storage reached 144 GW at the end of 2025, more than the rest of the world combined, while coal capacity additions in the first half were the highest of any first half in a decade. Western provinces with surplus power, including Gansu and Inner Mongolia, are being developed as computing hubs, which [Bloomberg](#) identifies as China's main advantage over the U.S. in the AI race.
- Oman's Nama Power and Water Procurement Company signed agreements on 2 July for the [500 MW Al Kamil solar project and the 2 GW Jabal Abyad pumped hydro scheme](#). Al Kamil, in South Al Sharqiyah, will be developed by a consortium of EDF, ONEIC, OQ Alternative Energy and Nama at a cost of around OMR 100 million. Jabal Abyad, near the Wadi Dayqah Dam, is expected to become the largest hydroelectric plant in the Middle East once operational. Storage at this scale is what allows a Gulf grid to carry a high share of solar through the evening peak, and pairing it with new solar capacity is a more durable route to energy security for a hydrocarbon exporter than adding generation alone.

Carbon Removal Technology

- Microsoft cut its carbon removal purchases by [about 80%](#), Bloomberg reported on 13 August, contracting [8.55 million tons](#) through mid-July against a far larger volume a year earlier, as data center expansion pushed its emissions up by a quarter. The company said the change was part of a disciplined approach and not a change in ambition, and its 2030 carbon negative goal stands. Other buyers are entering, though at much smaller scale. [CDR.fyi](#) recorded JPMorgan Chase contracting 61,500 tons from Charm Industrial, TD Bank 28,000 tons from Deep Sky and Climeworks, and RBC and Microsoft buying North America's first certified direct air capture credits from Deep Sky. Banks can diversify the buyer base, but none is yet close to replacing a single purchaser that accounted for most of the market.
- The gap between what engineered removals cost and what buyers will pay remains wide. A [BCG survey](#) published on 21 September found that buyer target prices for carbon credit portfolios have tripled since 2022, and that buyers would like engineered removals to make up 20% to 25% of their portfolios. Direct air capture suppliers are asking around \$900 a ton, however, while half of buyers cap their willingness to pay at \$365, and enhanced rock weathering at \$330 to \$390 a ton engages only 40% of buyers. In the United States, Chevron [withdrew on 18 August](#) from the Western Regional Direct Air Capture Hub in Kern County, California, the only one of the proposed regional hubs to advance through federal negotiations, with the company saying the decision did not reflect on the viability of direct air capture.
- Compliance markets are emerging as the more reliable source of long-term demand. The European Commission's [ETS review proposal](#) of 17 July would bring domestic permanent removals into the EU carbon market and allow the use of up to 260 million allowances' worth of high-quality international credits between 2036 and 2040. Removals would be certified under the EU's [Carbon Removals and Carbon Farming framework](#), whose first methodologies for direct air capture, bioenergy with carbon capture and biochar were adopted in February. If enacted, it would make the EU carbon market the first major compliance source of demand for durable removals, anchoring that demand in regulation.
- In the Gulf, Holcim UAE and the Omani mineralization company 44.01 began [continuous operations on 15 July](#) at a pilot in Fujairah that captures 4 to 4.5 tons of CO₂ a day from cement plant flue gas and injects it into ultramafic rock, where it mineralizes into carbonate. The pilot is industrial abatement, since the carbon comes from a cement kiln, but the storage route is the same peridotite mineralization 44.01 developed in Oman and can be paired with direct air capture for durable removal. Founder Talal Hasan said the project shows “permanent carbon storage can be deployed today to decarbonise an industrial site.” The Hajar mountain ophiolite that runs through Oman and Fujairah gives the region storage capacity that does not depend on depleted oil and gas reservoirs.

Green Hydrogen

- Construction of the [NEOM Green Hydrogen Company complex](#) in Saudi Arabia was completed in August and the \$8.4 billion plant moved into commissioning, with commercial operations targeted for 2027. Powered by about 4 GW of solar and wind, it is designed to produce up to 600 tons of hydrogen a day for conversion into roughly 1.2 million tons of green ammonia a year, all of it contracted to Air Products under a 30-year offtake agreement. The project, a joint venture of ACWA Power, Air Products and NEOM, will be the first gigawatt-scale test of whether green ammonia can be produced and shipped at a commercial price, and its location on the Red Sea coast keeps it clear of Hormuz.

- The Hormuz closure has strengthened the security case for hydrogen derivatives produced outside the strait while leaving the cost case unchanged. [ORF Middle East](#) estimates that 23% of globally traded ammonia normally passes through Hormuz, and notes that importers such as India are securing long-term green ammonia contracts while green ammonia remains about twice as expensive as conventional supply. Oman's hydrogen hub at Duqm lies outside the strait, which is a strategic advantage, but the program has narrowed. After the HyDuqm consortium and BP withdrew in late 2025, [seven of the nine](#) auction-winning projects remain in development toward Hydrom's target of more than 1 million tons a year by 2030, and demand at a viable price is still the binding constraint.

Biodiversity

- The Tropical Forest Forever Facility, launched at COP30, has [\\$7.3 billion in government pledges](#) against a target of \$10 billion in public money by the end of 2026, including \$3 billion from Norway, \$1 billion each from Brazil and Indonesia, and a £400 million UK loan announced in September. Brazil's environment minister, João Paulo Capobianco, said talks were under way with China, Korea and Japan, and BRICS leaders endorsed the facility in New Delhi. The fund is designed to pay tropical forest countries for each hectare kept standing from the returns on a larger blended investment pool, though first payments are [unlikely before 2028](#). It remains the most concrete attempt yet to give standing forests a financial value.
- The International Seabed Authority Council, meeting from 13 to 24 July, [deferred adoption of the mining code](#) to March 2027 and extended for 5 years the exploration contract of Nauru Ocean Resources Inc., a subsidiary of The Metals Company. The Metals Company's U.S. arm has applied to NOAA for commercial recovery permits under U.S. law, outside the ISA framework, and a decision is pending. Forty-five countries now back a moratorium or precautionary pause on deep-sea mining. Continued delay at the ISA raises the likelihood that the first commercial extraction comes through the unilateral U.S. route, which would weaken the multilateral regime for the seabed beyond national jurisdiction. CBD COP17 meets in Yerevan in October, where parties will review collective progress under the Kunming-Montreal framework.

Climate Finance

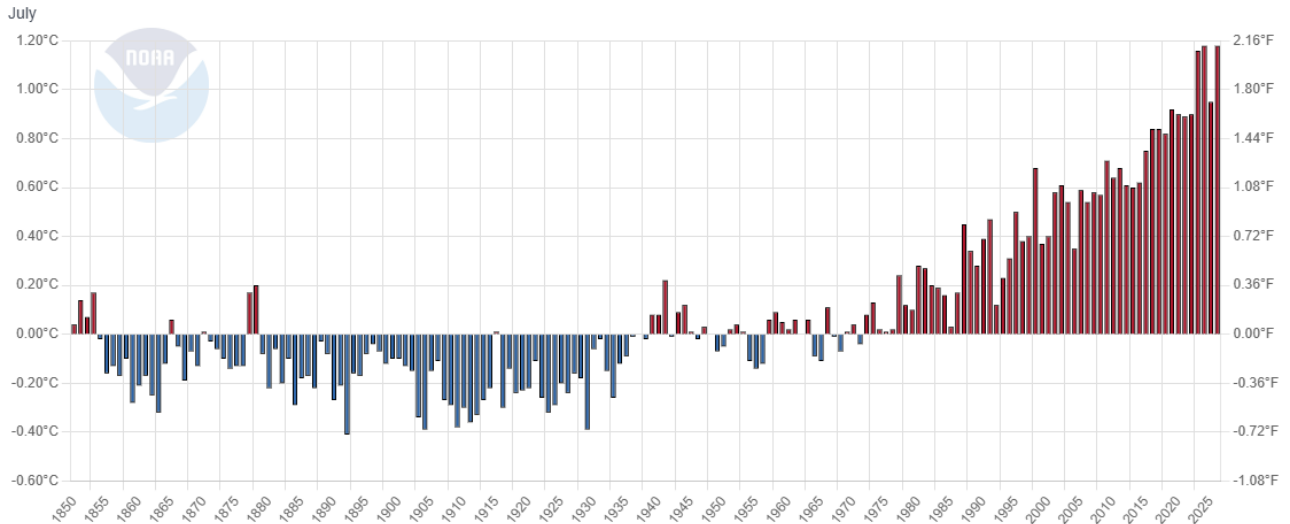
- Multilateral development banks provided a [record \\$163 billion in climate finance in 2025](#), up 19%, according to their joint report released on 13 July. Low- and middle-income countries received \$103 billion, of which \$35 billion went to adaptation, and the banks mobilized a further \$115 billion in private finance, though only \$35 billion of it in developing economies. The banks are running ahead of their 2030 targets of \$120 billion a year for low- and middle-income countries. With bilateral budgets under pressure and Washington absent from international climate funds, the MDBs have become the main channel through which public climate finance is still growing.
- The Fund for responding to Loss and Damage [postponed its first project approvals](#) at its ninth Board meeting in Manila in July. Nearly 180 requests worth about \$2.8 billion have been submitted against \$350 million available, with a cap of \$20 million per project, and only 55% of the roughly \$820 million pledged since COP28 has been paid in. Approval of 15 to 20 projects is now expected in December. Board members described “unhelpful competition” among vulnerable countries, and the civil society observer Harjeet Singh said the fund had not yet been able to provide “a single penny” to people suffering now. The fund's rules and structures are in place. Its constraint is money, with paid-in contributions far below the scale of requests.

- The Green Climate Fund Board, meeting in [Dushanbe from 29 June to 2 July](#), approved about \$257 million across 10 funding proposals and launched the process for its third replenishment covering 2028 to 2031. The approvals compare with a record \$1.2 billion at a single meeting a year earlier. The replenishment will take place as donors face the announced U.S. withdrawal from the UNFCCC and the energy crisis, and its outcome will be one of the first practical tests of the \$300 billion goal agreed at Baku, which runs to 2035.
- Green bond issuance reached a [record \\$193 billion in Q2](#), according to Moody's, with labeled sustainable bond issuance up 4% year on year. Europe supplied 58% of Q2 volume, up from 44%, as agencies and sovereigns led growth, while Asia Pacific green volumes fell 42%. Sustainability-linked bonds were down 63% year to date as issuers continued to favor use-of-proceeds structures, and blue bonds reached a record \$3.7 billion in the first half. Capital markets are growing as a source of transition finance, but the growth is concentrated in Europe and among public issuers, which leaves the developing economies with the largest financing needs least able to use it.

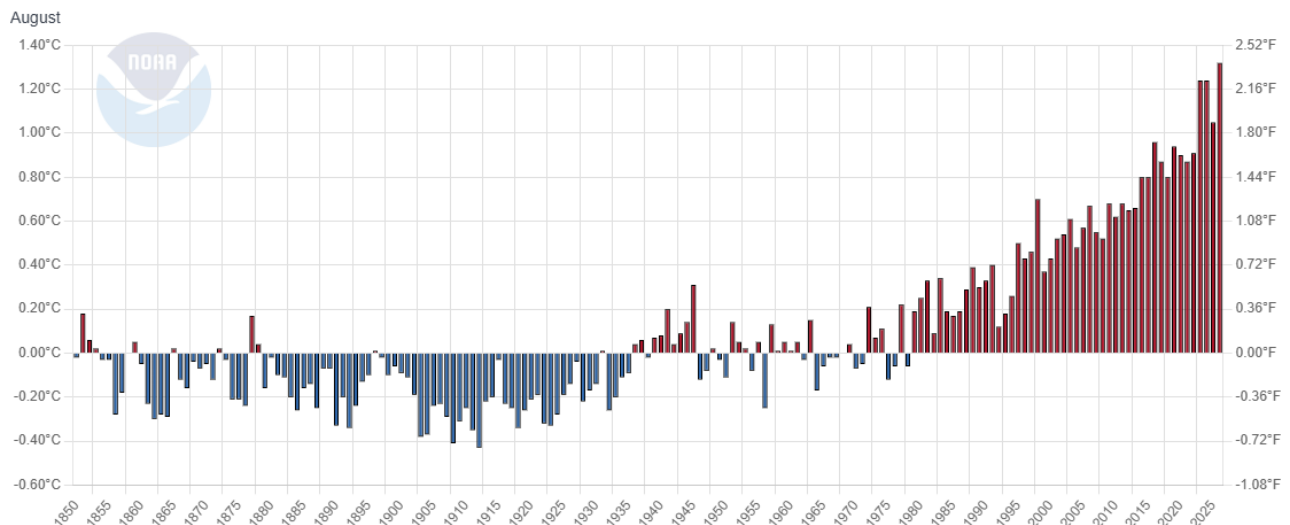
Climate Charts & Data Visualizations

NOAA – [Global Climate Report](#)

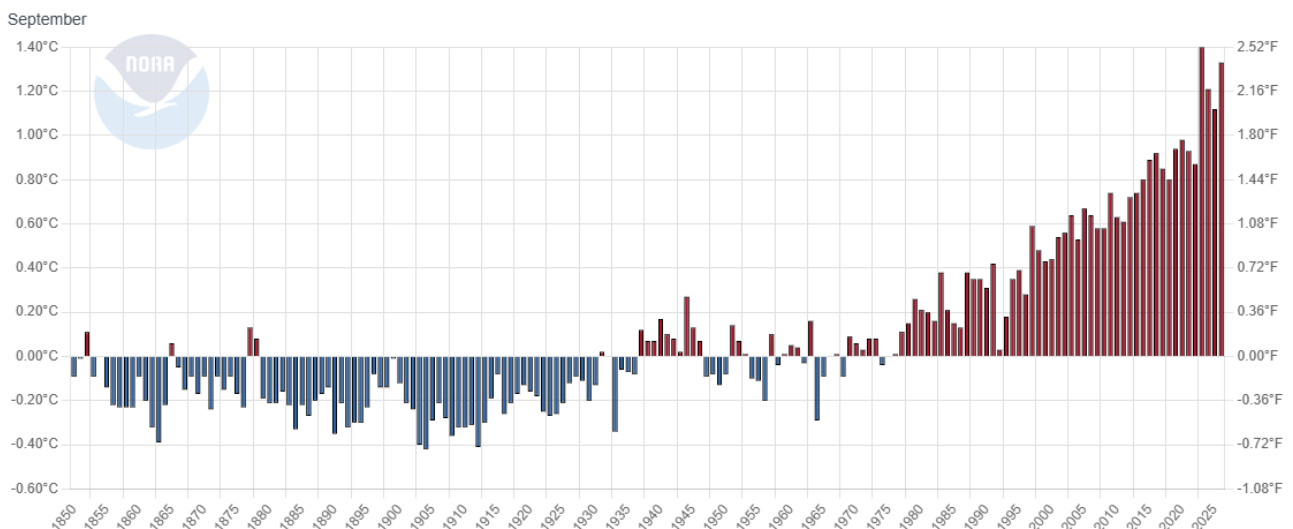
Global Land and Ocean Average Temperature Departures



Global Land and Ocean Average Temperature Departures



Global Land and Ocean Average Temperature Departures



U.S. & EU Energy Prices Comparison

Fuel Price Comparison: United States and Europe

Pump prices for gasoline and diesel, shown in USD per US gallon and EUR per liter. Blue figures are entered values. Black figures are calculated.

Pump prices

Region	Market	Gasoline		Diesel		Source and date
		USD/gal	EUR/L	USD/gal	EUR/L	
United States	California (US maximum)	\$6.38	€1.500	\$8.36	€1.966	AAA on 6 Oct 2026; \$6.38 and \$8.36.
United States	US average	\$4.37	€1.027	\$6.32	€1.486	AAA national average, 6 Oct 2026
Europe	Denmark (EU maximum)	\$11.31	€2.658	\$10.81	€2.542	European Commission Weekly Oil Bulletin, 28 Sep 2026
Europe	EU average	\$8.95	€2.104	\$9.51	€2.237	European Commission Weekly Oil Bulletin, 28 Sep 2026

Europe compared with the United States

Comparison	Gasoline		Diesel		Reading
	USD/gal	EUR/L	USD/gal	EUR/L	
EU average minus US average	+\$4.58	+€1.077	+\$3.19	+€0.751	Positive means Europe is more expensive.
EU average as a multiple of US average	2.05x		1.51x		EU average: 2.0x the US average for gasoline, 1.5x for diesel.
Denmark minus California	+\$4.93	+€1.158	+\$2.45	+€0.576	Most expensive market on each side.
Denmark as a multiple of California	1.77x		1.29x		Denmark: 1.8x California for gasoline, 1.3x for diesel.

Crude oil benchmarks

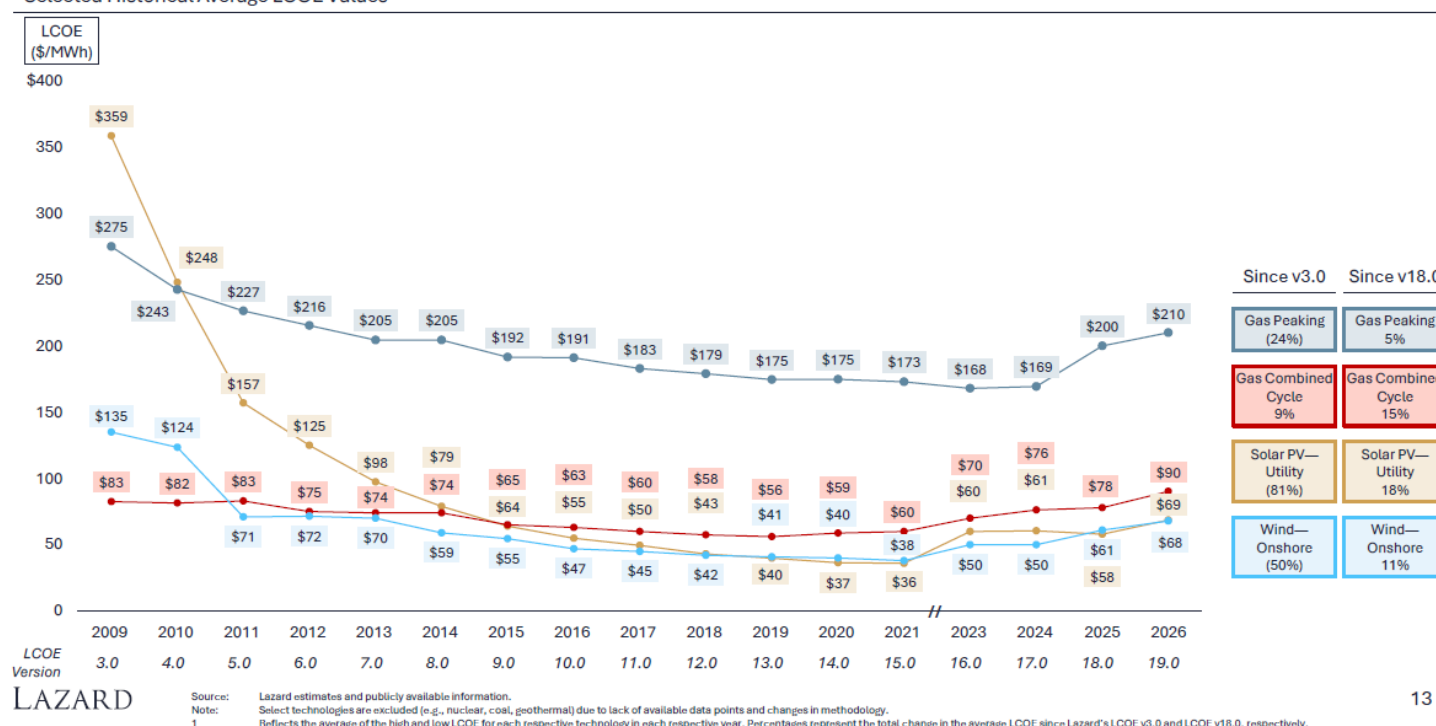
Benchmark	Per barrel		Per unit volume		Source and date
	USD/barrel	EUR/barrel	USD/gal	EUR/L	
Brent (global benchmark)	\$101.55	€90.38	\$2.42	€0.568	Spot quote, 7 Oct 2026 (onevalor.com).
WTI (US benchmark)	\$90.28	€80.35	\$2.15	€0.505	Spot quote, 7 Oct 2026 (onevalor.com).

Lazard — [Levelized Cost of Energy+](#)

Levelized Cost of Energy Comparison—Historical LCOE Comparison

Lazard's nearly 20 years of LCOE data demonstrate that technology costs benefit from economies of scale and development over time; wind and solar LCOEs have risen from their 2021 lows but remain well below historical peaks and below conventional new-build alternatives

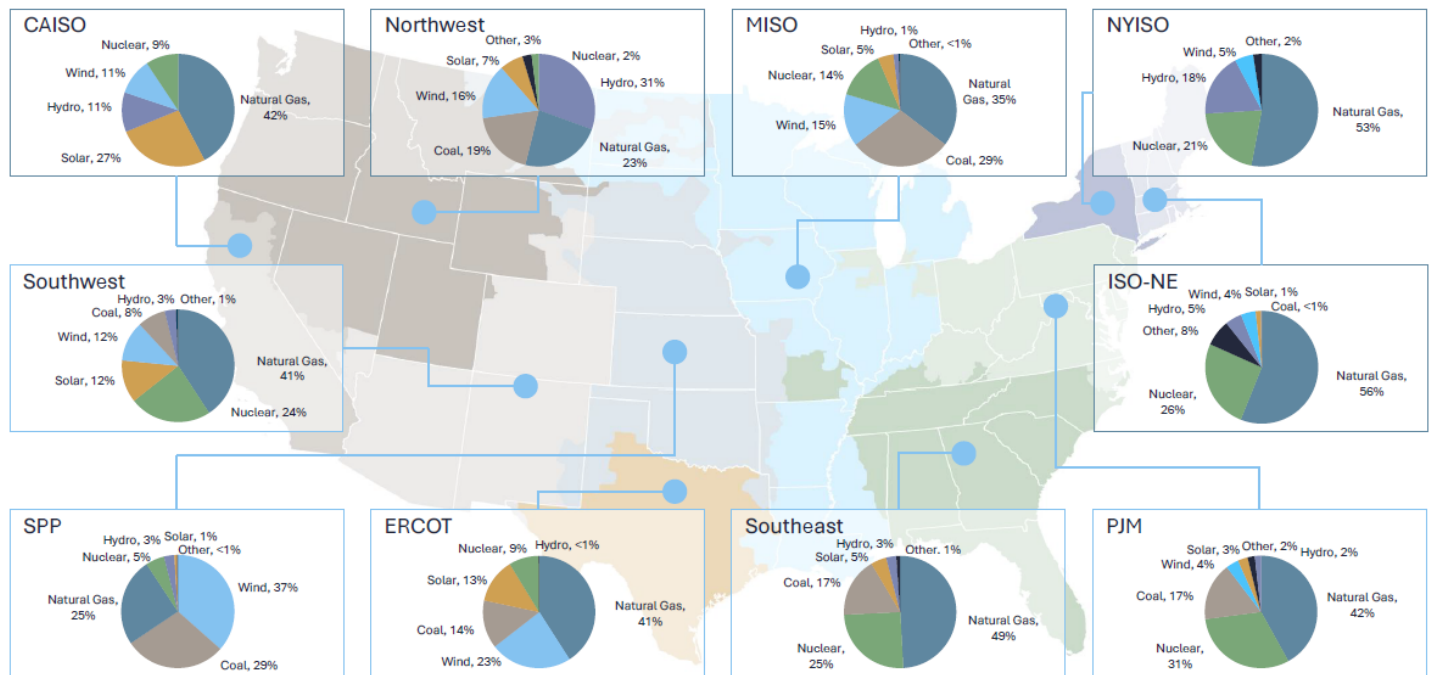
Selected Historical Average LCOE Values¹



Market Overview—Current Generation Mix

The current generation mix across the U.S. varies significantly by market—resource availability, operational constraints, load profiles, transmission infrastructure, seasonal weather patterns and regulatory constructs, among other factors, are key drivers of such variation

2025 Generation Mix by Region



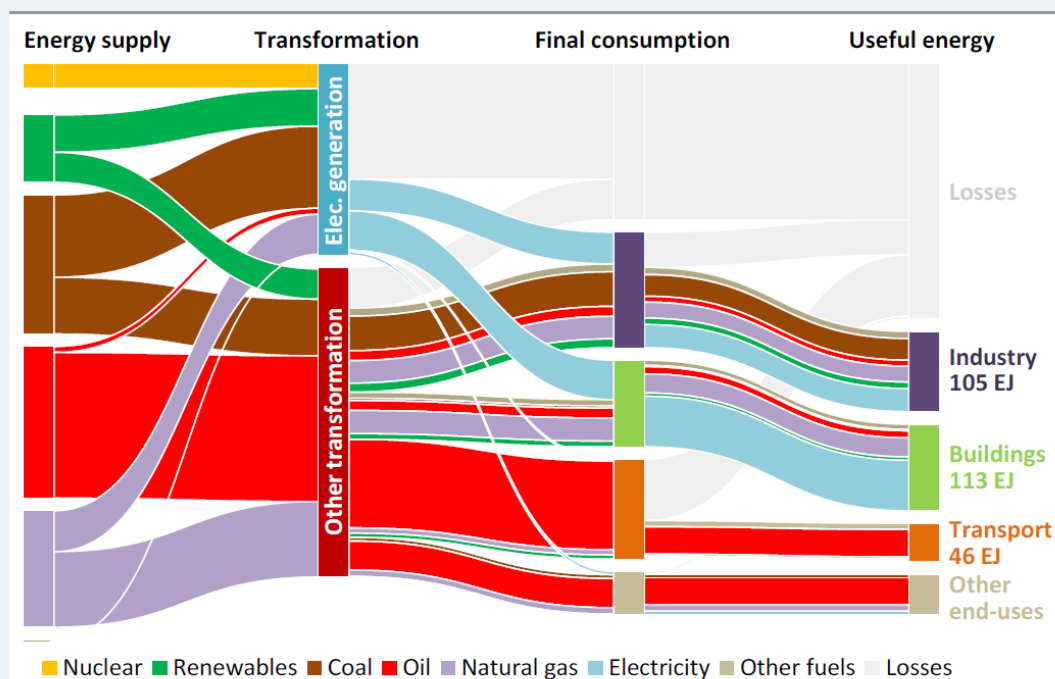
LAZARD

Source: Publicly available information.
 Note: Figures may not sum due to rounding.

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IEA — [Electrification 2026](#)

Figure 1.4 ▶ Global energy flows from primary to useful energy by energy carrier and sector, 2025



IEA. CC BY 4.0.

The global energy system takes primary energy flows and converts them to useful energy, but substantial heat losses take place during the process

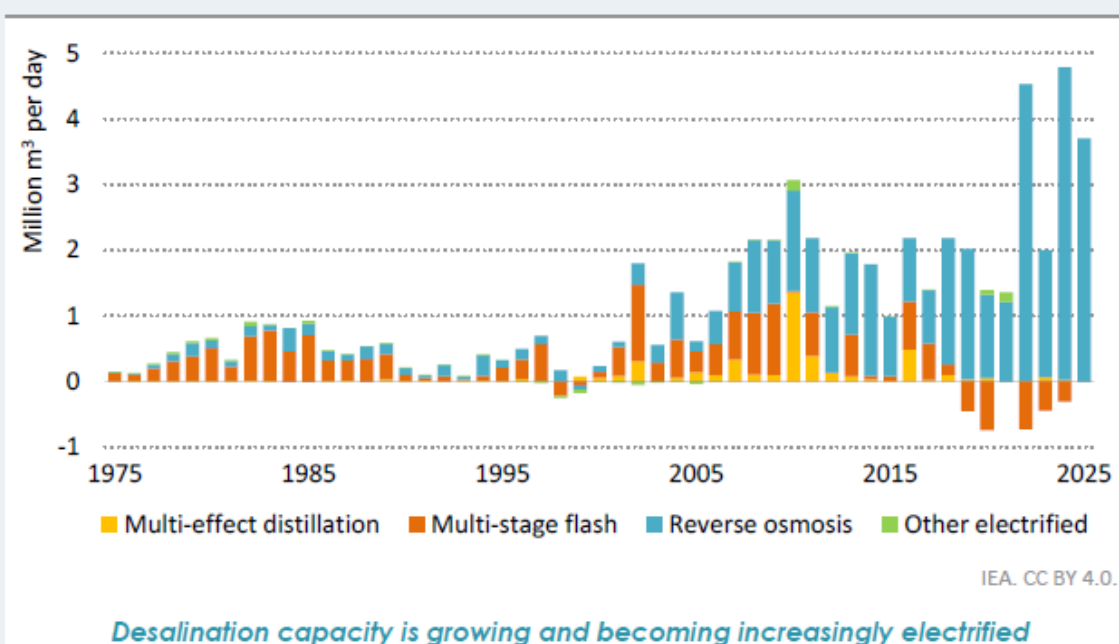
Box 2.2 ▶ How electrification is transforming desalination

As populations and economies grow, water needs are rising, placing increasing pressure on freshwater resources. Over 3 billion people live in highly water-stressed areas today, and 85% of them live in emerging market and developing economies. Desalination was initially concentrated in the Gulf region in the 1970s to produce freshwater; its use has since expanded as related technologies have developed.

Around 40% of global desalination capacity, including the world's largest plants, is located in the Middle East and North Africa (MENA) today. Multi-effect distillation and multi-stage flash – the thermal desalination technologies which have historically dominated in the MENA region – rely mostly on natural gas (or sometimes oil, especially in Gulf countries) for the thermal processes, while electricity powers auxiliary steps such as pumping.

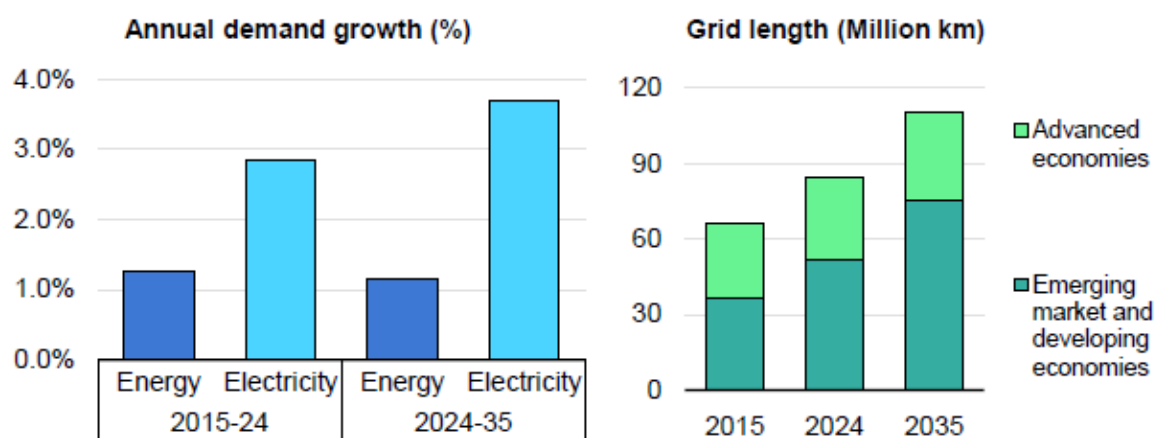
In recent decades, electricity-powered membrane technologies (especially reverse osmosis) have quickly gained market share in the MENA region (Figure 2.15). The last major new thermal plant in the region was added in Qatar in 2018. Thermal plants typically use up to ten times more energy than reverse osmosis for the core desalination process, which means that electrified desalination offers significant energy-saving potential. With reverse osmosis and other membrane-based plants now accounting for over 60% of installed capacity in the region and more than 80% globally, electricity consumption for desalination has doubled since 2010.

Figure 2.15 ▶ Net desalination capacity additions by technology in the Middle East and North Africa, 1975-2025



Note: other electrified includes desalination processes using nanofiltration, electrodialysis and electrodeionisation.

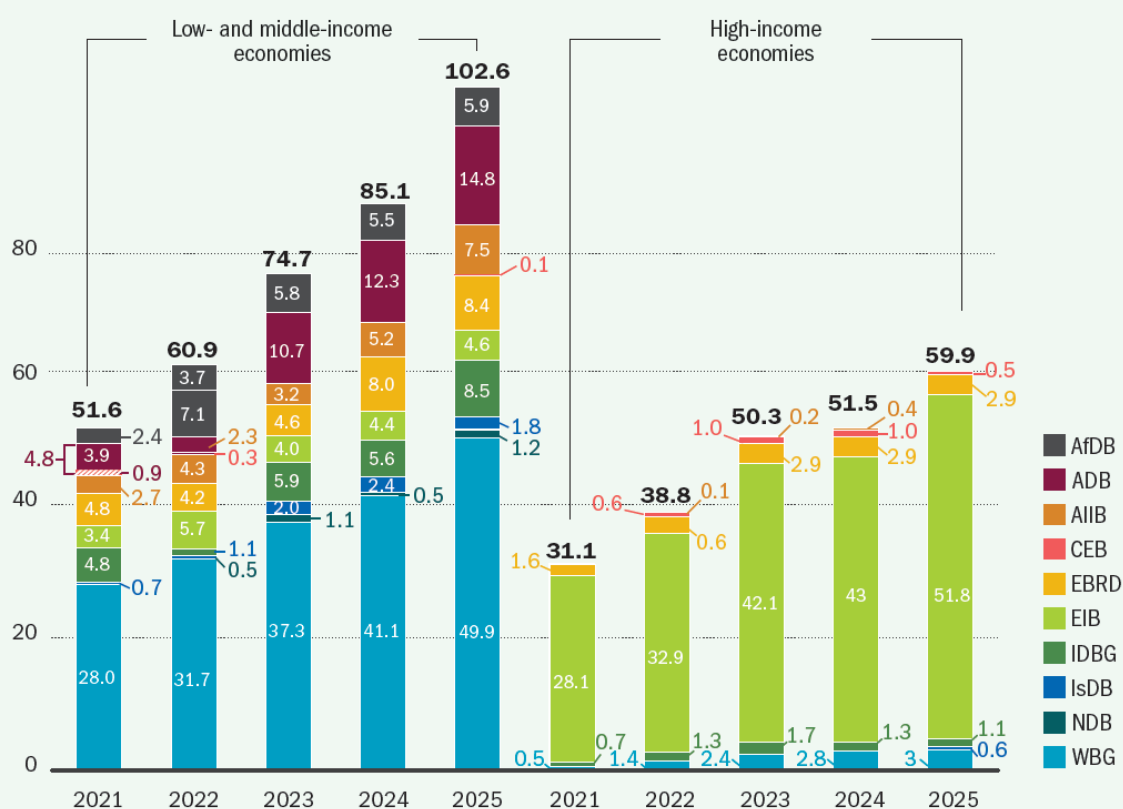
Source: IEA analysis based on GWI DesalData (2026).

IEA — *Modernising Grids in the Age of Electricity***Demand growth and the need for grid expansion to 2035 in the Current Policies Scenario**

IEA. CC BY 4.0.

Sources: IEA (2026), [Electricity](#); IEA (2025), [World Energy Outlook](#).

2025 [Joint Summary Report](#) on Multilateral Development Banks' Climate Finance — AfDB, ADB, AIIB, CEB, EBRD, EIB, IDBG, IsDB, NDB, WBG

MDB CLIMATE FINANCE (IN \$ BILLION)

The EUR:USD exchange rate used for 2025 data is 1:1.13. Data for earlier years uses the published methodologies and exchange rates for those years.

MDBs have exceeded their collective 2025 climate finance goals set in 2019 and are on track to reach the 2030 climate finance estimates announced at COP29.