BCCC

ICAS
Institute for China-America Studies

ICAS Blue Carbon & Climate Change Program

Quarterly

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ICAS Blue Carbon & Climate Change Program

The ICAS Blue Carbon and Climate Change (BCCC) Program explores new policy pathways for sustainably developing the blue carbon economy and combating climate change.

The goal of this program is to establish a platform for academic exchange between experts around the world to produce tangible policy recommendations for countries to follow together. Most prominently, the program endeavors to find new pathways for multilateral engagement and mediation in areas of competition to promote mutually beneficial cooperation on climate change where possible.

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Learn more on the ICAS BCCC Program webpage

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ICAS Blue Carbon & Climate Change Quarterly

BCCC

January - March 2026

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This Season's Global Climate Affairs

Issues & Updates on Blue Carbon

Threatened Mangroves and Disaffected Youth: Geneva Foundation Sets Sail On New Expedition

Monday, March 23
Source: *Geneva Solutions*
[Switzerland]

The research vessel Fleur de Passion, operated by the Fondation Pacifique, will embark on a four-year global expedition focused on mangrove ecosystems in April, combining scientific research with youth education. The mission will study the health of mangroves, while also promoting their vulnerability to climate change and human pressures.

Bringing Marine Life Back to South Florida's 'Forgotten Edge'

Tuesday, March 17
Source: *npr*
[The United States]

In Pompano Beach, Florida, a marine construction company is piloting new "living seawall" solutions by installing mangrove planters onto hardened coastal infrastructure, aiming to restore some of the ecological functions. Traditional seawalls, while protecting property, eliminate habitats once dominated by mangroves and other intertidal ecosystems, reducing biodiversity and weakening coastal resilience. The new design mimics mangrove roots and natural textures to support marine life and partially reintroduce ecosystem benefits.

Environmental Activists Are Fighting to Keep The Mangroves in Broward as Developers Want To Remove Them

Thursday, February 26
Source: *CBS News*
[The United States]

A proposed warehouse development in a mangrove area in Dania Beach, Florida, has sparked local opposition over the potential loss of a critical coastal blue carbon ecosystem that supports biodiversity and stores significant amounts of carbon. While the developer argues the site is degraded, scientists and community advocates say the mangroves are healthy and warn that removing even a small parcel could set a precedent for gradual ecosystem loss.

KKP Targets 2027 for Indonesia's Blue Carbon Market Entry

Monday, February 23
Source: *Antara*
[Indonesia]

Indonesia plans to launch its first blue carbon projects on international carbon markets by 2027, according to the Ministry of Marine Affairs and Fisheries. The Ministry aims to prepare at least two pilot projects, emphasizing rigorous validation and verification processes to meet carbon market standards, while prioritizing

seagrass inclusion to expand its NDC framework. Indonesia is positioning blue carbon as both a climate mitigation tool and a source of economic value, though success will depend on regulatory clarity, data accuracy, and implementation capacity.

Indonesia Bolsters Blue Carbon Ecosystem to Mitigate Climate Impacts

Tuesday, February 10
Source: *Antara*
[Indonesia]

Indonesia is strengthening governance of its blue carbon ecosystems as part of its broader carbon pricing and emissions control framework under Presidential Regulation No. 110/2025, with the Ministry of Marine Affairs and Fisheries identifying 18 priority zones for national blue carbon reserves. The initiative focuses on protecting and restoring mangroves, seagrass, and coastal wetlands to enhance carbon sequestration while supporting biodiversity and local livelihoods, alongside pilot projects and expanded regional implementation.

Underwater Drones Reveal the Ocean's Potential to Store Carbon

Sunday, January 25
Source: *Bloomberg*
[Japan]

Japan's Fujitsu Ltd. is developing underwater drone technology to measure carbon absorption in coastal ecosystems, aiming to scale up the emerging blue carbon credit market by improving monitoring and verification. By mapping habitats like mangroves and seagrasses and creating digital models to estimate CO_2 storage, the technology could help unlock higher-value nature-based offsets that offer both carbon sequestration and ecosystem benefits.

MOL, TMAM, and Idemitsu Kosan Launch Blue Carbon Initiative Aimed at Advancing Decarbonization through Seagrass Bed Restoration

Wednesday, January 21
Source: *Mitsui O.S.K. Lines*
[Japan]

Japanese firms including Mitsui O.S.K. Lines, Idemitsu Kosan, and Tokio Marine Asset Management have launched a joint initiative to develop blue carbon projects through seagrass restoration. The effort aims to generate carbon sink value while supporting biodiversity and local economies, with demonstration projects in coastal Japan designed to build technical know-how and assess scalability under emerging blue carbon credit systems. The initiative reflects growing private-sector interest in nature-based solutions as both a decarbonization pathway and a potential carbon market opportunity.

Environmental Protection

News on Environmental Protection:

- **United States**: The Trump administration is considering rolling back federal speed restrictions on large vessels in waters frequented by North Atlantic right whales, with NOAA considering replacing the existing rules with technology-based alternatives that are not-yet mature. The speed limits, in place since 2008, were designed to protect the endangered species from vessel strikes, one of its leading causes of death alongside fishing gear entanglements. (*Grist*, March 10)

- **Global**: More than 150 countries, including China, India, and EU member states, approved a major report by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) warning that unchecked economic growth and a GDP-focused model are driving global biodiversity loss. The report argues that markets fail to properly value ecosystem services such as pollination and climate regulation. The U.S. was not among the countries who signed the report. (IPBES, February 9)

- **South Africa**: South Africa plans to reinstate trophy export quotas for black rhino, elephant, and leopard hunts for the first time in about six years. The new environment minister, Willie Aucamp, proposed allowing exports from 150 elephants, 12 black rhinos, and 11 leopards in 2026 and again in 2027, subject to public comment. Former environment minister Dion George was removed in November, partly due to his refusal to issue the quotas and failed to engage with the hunting industry. (*Bloomberg*, February 6)

- **Global**: Biodiversity Beyond National Jurisdiction (BBNJ) has entered into force. The landmark U.N. high seas biodiversity treaty creates a legally binding framework to establish marine protected areas and require environmental assessments in international waters as countries work toward protecting 30% of the oceans by 2030. It does not cover deep-sea mining, which remains under the authority of the International Seabed Authority. With more than 80 countries having ratified it so far, the treaty marks the first comprehensive legal regime governing two-thirds of the ocean. (*Reuters*, January 16)

- **United States**: The Environmental Protection Agency has stopped assigning a monetary value to avoided deaths and illnesses from cost-benefit analysis of PM2.5 and ozone pollution when writing new clean air rules. The agency argued that past estimates were too uncertain, and said that it will still consider health effects qualitatively. The change undermines EPA's core mission and weakens protections by ignoring the economic value of preventing pollution-related harm, marking a major break with decades of cost-benefit practice. (*Bloomberg*, January 13)

- **Germany**: Germany's carbon emissions fell by 9 million tons in 2025, largely due to its weak industrial output rather than due to progress in clean technology. Experts warn that a future industrial rebound will make Germany's 2030 climate target much harder to reach. Meeting the goal would require a fully climate-neutral power sector by 2030, eliminating all gas-fired plants, which directly conflicts with government plans to build new gas capacity. Officials will present an updated climate program in March. (*Bloomberg*, January 7)

Climate Policy & Diplomacy

U.S. Climate Rollbacks Fails to Eliminate Real Costs

What is Happening

- The U.S. is withdrawing from 66 international organizations, including 31 U.N. entities; among these, 3 are climate- and environment-related: the U.N. Framework Convention on Climate Change (UNFCCC), U.N. Environment–linked bodies such as the Office on Violence Against Children's environmental programs, and other UN agencies with environmental mandates cited broadly in the executive order. (*NPR*, January 8)

- The U.S. formally exited the Paris Agreement on January 27, 2026 again after the Biden administration re-joined the pact. The decision came one year after Trump announced the withdrawal on his first day in office. The U.S. is the only country to leave the pact twice. (*Politico*, January 27)

- A federal judge ruled that the Energy Department violated the Federal Advisory Committee Act when it secretly convened a five-member Climate Working Group to produce a report downplaying climate change dangers, without holding public meetings or assembling a balance of viewpoints as the law requires. The EPA had cited the report to justify repealing the endangerment finding. (*The New York Times*, January 30)

- The Trump administration plans to roll back the 2024 Mercury and Air Toxics Standards on mercury and other hazardous emissions from coal-fired power plants to 2012 limits, arguing the move will reduce costs and support baseload power amid rising demand from data centers. The 2024 Standard is still in place after the Supreme Court declined the suspension. (*Reuters*, February 20)

- The Trump administration rescinded the 2009 Obama-era "endangerment finding," which determined that greenhouse gas emissions threaten public health and underpins federal climate regulations, including vehicle emissions standards. The move was described by the White House as the largest deregulatory action in U.S. history. (White & Case, February 23)

- The EPA proposed loosening Biden-era emissions limits on ethylene oxide, a cancer-causing gas, from roughly 90 commercial medical device sterilization facilities, including rescinding a requirement for round-the-clock emissions monitoring. The agency estimated the rollback would save companies $43 million annually in compliance costs. About 2.3 million people live within two miles of these facilities. (*The New York Times*, March 13)

- 24 states, 10 cities, and 5 counties filed a lawsuit in the U.S. Court of Appeals for the D.C. Circuit challenging the EPA's repeal of the 2009 endangerment finding. The case is the second major legal challenge to the repeal, following an earlier suit by environmental and public health groups. (*Associated Press*, March 19)

Why it Matters

The Trump administration's case for environmental deregulation rests on a straightforward premise of removing compliance requirements and reducing nominal costs. However, that framing fails to address the real costs of externalities. Environmental regulations exist to identify and reduce externalities, forcing polluters to internalize costs they would otherwise pass onto communities, public health systems, and future generations. Dismantling those regulations does not eliminate the costs but transfers them. The administration's deregulatory agenda is, at its core, a deliberate redistribution of burdens away from corporations and back onto the public.

The factual basis on which these rollbacks are being justified deserves scrutiny of its own. The administration's repeal of the endangerment finding, relied in part on a report that was manufactured to support a predetermined outcome, whereas the endangerment finding itself was grounded in decades of scientific consensus. This replacement is not a policy disagreement, but an attempt to substitute manufactured justification for established evidence.

At the community level, the practical consequences of this approach are already visible. Mercury and ethylene oxide are toxins with well-documented health impacts, concentrated near their emission sources. Rolling back the standards governing both shifts the cost of exposure from the corporations operating the facilities onto the residents living near them. The burden is carried by the communities least positioned to resist it. Those with the means to relocate are forced to absorb the disruption of moving. However, those without have no other option but to deal with the health consequences of staying. The lawsuit filed by local government represented by the 24 states, 10 cities, and 5 counties demonstrated the community's dissatisfaction towards this shift

Greenhouse gases like CO_2 operate by the same logic at a larger scale. The externalities of greenhouse gas emissions are more diffuse, spread across geographies and decades, but they are not hypothetical. Rising insurance losses, increasing disaster damage costs, and growing public health burdens are already measurable. Removing the endangerment finding does not alter the facts. It removes the requirement that the federal government treat these costs as its responsibility, pushing them further onto individuals, local governments, and the private sector.

At the international level, the argument shifts from externalities to historical responsibility. The United States is the largest cumulative emitter in history. Multilateral frameworks like the Paris Agreement are partly mechanisms for distributing the cost of addressing damages that the developed world generated first and disproportionately. Withdrawing from those frameworks for the second time is not a principled stand against ineffective policy. It is an abdication of an obligation the U.S. has stronger grounds to bear than almost any other country, transferred onto nations that contributed least to the problem and have the fewest resources to absorb its consequences.

The administration is systematically identifying costs that corporations currently bear, removing the regulatory mechanisms that impose them, and allowing them to settle elsewhere through deregulation. However, the actions should be more accurately described as a policy of making pollution cheaper to produce and more expensive to live with, and ensuring that those two experiences fall on different people.

More on Climate Policy & Diplomacy:

- **China:** China has launched a three-year plan (2026–2028) to accelerate the development of energy-saving equipment as part of its broader low-carbon transition. The plan prioritizes breakthroughs in key technologies such as high-efficiency electric motors, transformers, and water electrolysis for hydrogen production, while expanding the use of AI and digital tools to optimize energy use. The initiative aims to reduce emissions from energy-intensive industries and strengthen the role of clean technology in driving green growth. (*Xinhua*, March 20)
- **United States**: More than 120 House Democrats introduced the Energy Bills Relief Act, which would restore clean energy tax credits eliminated by the One Big Beautiful Bill Act, reinstate terminated renewable energy grants, authorize $2.1 billion for grid infrastructure, and direct federal agencies to permit 60 gigawatts of wind, solar, and geothermal development on public lands by 2030. The bill would also block executive orders curbing renewable energy projects and prevent large energy users like data centers from passing grid upgrade costs onto residential consumers. (*Inside Climate News*, March 18)
- **Brazil**: Brazil has unveiled a new climate plan targeting a 49–58% reduction in emissions by 2035. The plan distributes responsibilities across sectors, with the largest reductions assigned to public and private land-use areas, and agriculture, industry, and energy face comparatively weaker targets. (*Folha de São Paulo*, March 18)
- **European Union**: The European Commission is considering an emergency package to address spiking energy prices, including relaxing carbon permit supply rules, temporarily easing free emissions permit criteria, allowing lower grid fees and energy taxes, and permitting more state aid for industrial users. The options will be presented at an EU leaders' summit in Brussels on March 19, though no final decisions are expected. (*Bloomberg*, March 12)
- **European Union**: The EU formally approved a legally binding target to cut greenhouse gas emissions by 90% from 1990 levels by the year 2040. The target falls short of the original 90% domestic reduction because only 85% would come from domestic reduction, with the remaining 5% met through international carbon credits. (*ESG Today*, March 5)
- **United States**: The Trump administration is planning to require large oil refineries to make up at least 50% of biofuel blending volumes that were waived for small refineries under the Small Refinery Exemption program. The blending requirements for larger refiners could increase their compliance costs, but boost demand for renewable fuel credits and support biofuel producers and farmers. The EPA is expected to finalize the reallocation plan by the end of March. (*Reuters*, February 26)
- **Global**: The 2026 IEA Ministerial Meeting took place in Paris from February 18 - 19. For the first time in nine years, the body failed to issue a unified communique and instead released a chair's summary due to deep divisions between the Trump administration and European governments. U.S. Energy Secretary Chris Wright rejected the net zero goal as unachievable and harmful, while most other ministers

reaffirmed support for the energy transition. The U.S. also threatened to quit the IEA if the net zero agenda isn't reformed. (*Bloomberg*, February 19)

- **United Kingdom**: Right-wing populist party Reform UK vowed to scrap Britain's planned carbon border adjustment mechanism (CBAM) and other green levies if it wins power, arguing the policy burdens businesses and aligns the U.K. too closely with the EU. Reform has also pledged to unwind parts of the government's EU reset and pursue a more interventionist "pro-British" procurement strategy, including favoring domestically produced steel, though such measures may face trade law constraints. (*Politico*, February 18)
- **European Union**: Europe's heavy industry is lobbying to preserve the EU's carbon border adjustment mechanism (CBAM) after the European Commission proposed granting itself discretionary powers to suspend parts of the regime under vaguely defined "unforeseen circumstances" to exempt certain goods impacted by the duty. (*Politico*, February 9)
- **European Union**: The European Union struggled to secure stronger emissions commitments at COP30, and is considering a revamped climate diplomacy strategy that would more aggressively use its trade, finance and development tools to influence future negotiations. EU climate ministers are set to discuss how to adapt to a more transactional geopolitical environment and strengthen the bloc's leverage ahead of future talks, while internal divisions continue to complicate the EU's own climate ambitions. (*Reuters*, February 2)
- **European Union**: The EU confirmed that its carbon border adjustment mechanism (CBAM) will not be modified as part of its new trade deal with India, rejecting requests for exemptions or more flexible rules for Indian companies. The EU committed only to holding technical talks on the levy and pledged that no other country, including the U.S., would receive more favorable CBAM treatment than India. (*Reuters*, January 27)
- **United States**: Congress advanced the bipartisan PROVE IT Act through the fiscal 2026 spending bill reports, directing the Department of Energy to study and compare the carbon intensity of U.S.-made goods with foreign products. The measure aims to demonstrate that American manufacturing is relatively cleaner and to bolster U.S. competitiveness as trade partners like the European Union implement carbon border tariffs under CBAM. (*E&E News by Politico*, January 27)
- **Global**: COP30 president André Aranha Corrêa do Lago published a letter calling for climate multilateralism to adopt a two-speed structure, where voluntary coalitions of willing countries pursue fast implementation alongside the slower consensus-based UN process. He also announced that the Brazilian presidency will develop voluntary roadmaps this year on fossil fuel transition and deforestation, outside the formal UN climate regime, to inform discussions at COP31 in Turkiye. (*Climate Home News*, January 27)
- **Brazil**: A major Brazilian grain traders' lobby, Abiove, and many of its members are withdrawing from the nearly 20-year soy moratorium, after a new Mato Grosso tax law removed benefits for companies

participating in the pact. The moratorium bars purchases of soy grown on recently deforested Amazon land, and is one of Brazil's most effective anti-deforestation tools. (*Reuters*, January 5)

Clean Energy & Technology

The Demise of Offshore Wind? Not Really

What is Happening

- A Chinese company successfully completed the first flight and power generation test of its S2000 floating wind power system, demonstrating a megawatt-class, airship-like device that hovered at 2,000 meters and delivered 385 kWh to the grid. The 3-MW system is designed to harness stronger, steadier high-altitude winds, and targets off-grid uses and complements ground wind power. The company has begun small-batch production and is building a domestic materials base to support future scaling. (*Global Times*, January 11)

- Judges of the U.S. District Court of the District of Columbia ruled to resume several offshore wind projects suspended by the Trump administration over claimed national security concerns. The projects include 2 Ørsted's projects and 1 Equinor's project. (*CNBC*, January 13) (*CNBC*, January 15)

- Technip Energies CEO Arnaud Pieton said demand for floating wind turbines has fallen sharply compared to expectations from three to five years ago, citing high costs and limited suitable environments for the technology. He noted that only a few floating wind projects are currently moving forward, reflecting broader challenges in the offshore wind sector. The industry has faced setbacks in Europe, where some countries failed to attract bidders for projects, and in the U.S. due to political objections. (*Reuters*, February 26)

- Wind and solar power generated 30% of the EU's electricity in 2025, surpassing fossil fuels at 29% for the first time. A 19% increase in solar capacity drove the record output, helping offset weaker hydropower due to drought, though gas-fired generation rose 8% to cover supply gaps. Renewables and nuclear together supplied 71% of EU electricity, while coal fell to a record-low of 9.2%. Despite this progress, grid underinvestment and continued gas reliance contributed to price volatility, prompting calls for more spending on grids and battery storage. (*Reuters*, January 21)

- Judge Royce Lamberth issued a preliminary injunction allowing Sunrise Wind, a wind farm 30 miles off Montauk Point, NY, to resume construction. This marked the Trump administration's fifth consecutive court loss in its effort to halt offshore wind projects along the East Coast. Judge Lamberth said the Interior Department's national security justification for the work stoppage was unpersuasive after reviewing the classified Defense Department report cited to support it. Ørsted, the project's developer, had reported losses of $2.5 million per day while construction was paused. (*The New York Times*, February 2)

- Ørsted agreed to sell its European onshore wind business to Copenhagen Infrastructure Partners for €1.4 billion, completing a divestment program Ørsted launched earlier this year to repair its balance sheet. The portfolio includes over 800 megawatts in operation and under construction across Ireland, the

UK, Germany, and Spain. The deal is expected to close in the second quarter. (*Bloomberg*, February 3)

- After failing five times in federal court to halt offshore wind farms under construction, the Trump administration is drafting settlement agreements to pay TotalEnergies nearly $928 million to cancel its leases for two projects off New York and North Carolina, the Attentive Energy and Carolina Long Bay wind farms. In exchange, TotalEnergies would abandon both projects and commit to investing in natural gas infrastructure in Texas. (*The New York Times*, March 17)

Why it Matters

Offshore wind is not dying, but it is being forced into a more selective role than its proponents envisioned a decade ago. The industry faces two distinct sets of pressures that are worth separating. The first is structural: cost reductions have slowed while cheaper alternatives have continued to scale, narrowing the conditions under which offshore wind makes economic sense. The second is political: in the United States, the Trump administration has mounted a sustained effort to halt offshore wind development that the courts have repeatedly rejected. Both matter, but they have different causes and different implications.

The core structural challenge is cost in terms of levelized cost of electricity (LCOE). Both offshore wind and solar PV are approaching their cost floors, but from very different levels. Solar has reached maturity and scale, landing at a floor that makes it the cheapest electricity generation source in history. Offshore wind has also seen substantial cost reductions over the past fifteen years, but its cost curve is flattening while the technology remains significantly more expensive than onshore wind and solar PV.

The gap is unlikely to close dramatically in the near term, because the remaining cost reduction potential in offshore wind is more incremental than transformative. This is the underlying reason investor appetite has weakened and why firms like Ørsted have moved to repair balance sheets through divestment rather than double down on expansion. That said, the near-term cost plateau is not necessarily a permanent ceiling. Innovation in wind technology continues in adjacent areas, as recent developments in high-altitude airborne wind systems demonstrate, and the history of energy technology suggests that breakthroughs tend to arrive on timelines that are difficult to predict. The current cost trajectory warrants caution, but not finality.

That said, dismissing offshore wind on cost alone overlooks the technology's genuine advantages. Its most underappreciated characteristic is that it does not compete for land. Onshore wind and solar both require substantial terrestrial space, which becomes a binding constraint in densely populated regions where land is scarce and expensive. Offshore wind sidesteps that constraint entirely by using ocean space, making it a practical solution for precisely the environments where electricity demand is highest and land availability is lowest. Onshore wind generation is also limited by the location of wind resources, whereas wind energy is abundant out on the ocean. The U.S. East Coast projects are a direct illustration of this logic. New York, New Jersey, Maryland, and the Carolinas are among the most densely populated and land-constrained regions in the country, and they are also among the largest electricity consumers. For these markets, offshore wind is not an expensive alternative to cheaper options, but often the only large-scale wind generation option.

Beyond its spatial advantages, wind remains a necessary component of the broader generation mix

regardless of cost comparisons with solar. Wind and solar are complementary rather than competing technologies, because wind generates power when sunlight is unavailable. The EU's 2025 milestone of wind and solar together surpassing fossil fuels in electricity generation reflects this dynamic working at scale. Battery storage is advancing, but it cannot yet reliably cover the full generation gap that solar leaves during nighttime and low-irradiance periods. Until it can, wind's role in the mix is not optional.

The Trump administration's national security justification for halting U.S. offshore wind projects is a different matter entirely, and the courts have treated it as such. Five consecutive losses in federal court, with judges finding the national security rationale unpersuasive even after reviewing classified Defense Department materials, is a significant signal. The administration has since resorted to drafting settlement agreements to pay nearly $1 billion to cancel leases it cannot legally block, redirecting the cancelled projects toward natural gas investment. The financial cost of this approach is substantial, and the strategic logic is inverted. Offshore wind strengthens energy security by diversifying the generation mix and reducing dependence on fuel supplies subject to price volatility and geopolitical disruption. Treating any non-fossil fuel generation capacity as a national security threat produces the opposite of its stated goal, especially under the current premise of greatly fluctuating global oil prices.

Looking into the future, offshore wind will continue to occupy a narrower and yet indispensable role in the energy mix than its proponents envisioned a decade ago, and the market is rationally adjusting to that reality. Its cost trajectory and competition from cheaper alternatives are legitimate reasons for the industry to recalibrate toward environments where its advantages are most pronounced. But recalibration is not demise. In densely populated coastal regions with limited land and high electricity demand, offshore wind remains a practical and strategically sound option. The political obstacles currently facing the industry in the U.S. are real, but they are not a market verdict. They are a policy choice, and an expensive one.

The Problem is not EV, The Problem is the Policies

What is Happening

- Global electric vehicle (EV) sales growth is expected to slow in 2026 as China scales back subsidies, Europe softens its combustion engine phase-out, and the US reverses key EV policies. BloombergNEF forecasts 24.3 million passenger EV sales this year with a 12% growth, down from 23% growth in 2025. US sales are projected to fall 15% after tax credits are withdrawn, while China's growth is set to ease as incentives narrow and competition intensifies. Despite weaker policy support, falling battery costs and new lower-priced models could support longer-term recovery. (*Bloomberg*, January 6)

- Fully electric cars outsold petrol-only vehicles in the EU for the first time in December 2025, with EVs taking a 22.6% market share against petrol's 22.5%, though hybrids remained the top category at 44%. Analysts caution the milestone is partly a statistical artifact, as some petrol cars were reclassified as mild hybrids, and expect it will still take roughly five years for EVs to genuinely dominate the market. (*Reuters*, January 27)

- Germany has introduced a €3 billion electric vehicle incentive programme running from January 2026 through 2029 to revive EV adoption after subsidy cuts weakened sales in 2024 and early 2025. The programme aims to reduce upfront costs, support domestic industry, and advance climate goals. The

scheme is targeted towards lower- and middle-income households. It offers subsidies for battery-electric vehicles, and for qualifying plug-in hybrids and range-extender vehicles, covering up to 800,000 vehicles. The program is also complemented by extended tax breaks and corporate fleet incentives. (European Commission, January 20)

- Ford is in an ongoing discussion about sharing its underutilized Valencia, Spain plant with Geely, which would allow Geely to avoid EU tariffs on Chinese-made EVs while boosting output at a factory currently running well below its 400,000-unit annual capacity. Ford has also held separate discussions with BYD and Xiaomi about potential collaboration, and in December struck a deal with Renault to jointly produce affordable EVs in northern France. (*Bloomberg*, February 4)

- BYD recorded a ten-fold increase in new car registrations in Germany in January, reaching 2,629, up from 235 a year earlier. It is double that of Tesla's 1,301 registrations in the same month. Tesla's European sales have weakened across multiple markets, with registrations falling to multi-year lows in France and dropping sharply in Norway. (*Bloomberg*, February 4)

- Chinese EV maker Nio plans to add 1,000 battery-swapping stations this year, expanding its 3,729-station network and reinforcing a $2.6 billion investment in the technology as it marks its 100 millionth battery swap. The system is facing growing competition from ultra-fast charging batteries that can deliver up to 500 km of range in 10 minutes. Nio, which partners with Geely, FAW and CATL, says the expansion reflects confidence in swapping's acceptance. (*South China Morning Post*, February 9)

- The European Commission plans to introduce minimum "made in Europe" requirements for public procurement of key green technologies, including batteries, solar and wind components, electric vehicles, power cables, and EV charging infrastructure. The draft proposal for the requirements also include increasingly strict sourcing rules over time, and would also set minimum shares for EU-made low-carbon goods. (*Reuters*, February 12)

- Lamborghini has cancelled plans to launch its fully electric model called the Lanzador, with CEO Stephan Winkelmann saying weak demand among luxury buyers risks making EV development "an expensive hobby." Instead, the company will focus on plug-in hybrid electric vehicles (PHEVs), with its entire lineup set to be hybrid by 2030 while continuing internal combustion engines for as long as possible. Winkelmann said customers value the emotional experience and engine sound that EVs currently struggle to deliver. (*The Times*, February 21)

- Nio achieved a historic milestone by completing 1 million battery swaps in less than a week during the Spring Festival travel rush, the first time it has reached that volume so quickly. The company also set multiple daily records records, first on February 15, and then later on February 18 with a peak of 177,627 swaps in a single day. (*Electric Vehicles*, February 23)

- BYD unveiled a new electric vehicle battery capable of charging from 10% to 97% in nine minutes, along with a new 1,500-kilowatt flash charging station, with plans to build up to 20,000 such stations in China by year-end. Select midrange and high-end BYD models will be equipped with the new battery, with the Denza Z9 GT offering up to 640 miles of range per charge. BYD has also announced the decision to launch the model in the European market. (*The Wall Street Journal*, March 5; *Reuters*, March 13)

- Volkswagen has begun mass production of the ID. UNYX 08, a full-size electric SUV co-developed with

Chinese EV maker Xpeng, set to go on sale in the first half of 2026. The model is part of a broader push to launch more than 20 new electric and plug-in hybrid vehicles in China this year, with a total of 50 new NEVs planned for the market by 2030. (Volks Wagen Group, March 13)

Why it Matters

Global EV sales continue to grow, and the EU milestone of fully electric cars outselling petrol vehicles for the first time is a meaningful signal that consumer demand is real and building. The pattern is consistent across markets. Where policy supports EV adoption, the market responds; where it is withdrawn, the market contracts. The constraint on the EV transition is not consumer appetite, but a reflection of the policy environment determining whether domestic industries can meet that demand.

Chinese manufacturers have moved beyond the phase of simply selling more EVs. They have moved on developing new technology that systematically solves the problems that have slowed adoption everywhere. BYD's latest charging technology and Nio's expanding battery swap network are direct responses to the two objections that have defined consumer hesitation: charging speed and range anxiety. These are not incremental improvements; they represent a serious narrowing of the gap between EVs and the convenience of conventional vehicles. European and American manufacturers have no comparable answer in the market yet. Tesla, once the benchmark for EV technology, is losing ground in Europe to Chinese competitors on both volume and innovation, whereas European producers were struggling to even build. The technology gap is real and widening.

China's EV industry was built through years of sustained and deliberate policy support, covering subsidies, infrastructure investment, and procurement requirements that created the demand base for domestic manufacturers to scale. Europe, during the same period, invested relatively little in building comparable domestic capacity and focused instead on trade barriers as a substitute for industrial policy. Incumbent automakers hedging toward plug-in hybrids rather than committing to full electrification, as Lamborghini's retreat illustrates, is a predictable outcome of an environment that never applied enough pressure to compete. The result is a structural disadvantage that trade measures alone cannot close.

The correction now underway is genuine. Germany's subsidy program, the EU's made-in-Europe procurement requirements for green technologies, and partnerships like VW's collaboration with Xpeng collectively point toward the kind of policy environment that can generate sustained domestic demand and industrial momentum. These tools work best in combination: procurement requirements create a protected demand floor while subsidies lower the cost barrier for consumers. The VW and Ford partnerships signaled that European and American manufacturers are beginning to absorb the technology gap through collaboration rather than waiting to close it independently. It is a late start, but the direction is right.

The EV transition is not a question of whether it happens but when. The market data has settled that. The only open question is which industries and economies will be supplying it. Governments that treated EV policy as optional did not opt out of the transition; they handed market share to competitors who arrived earlier and invested more deliberately. Europe is correcting its course. How much ground can still be recovered depends on how seriously, and how quickly, that correction is pursued.

More on Clean Energy & Technology:

- **China / European Union**: Nearly 80% of Chinese companies operating in the EU plan to expand their investment there, according to a report by the Chinese Chamber of Commerce to the EU, compared to only 38% of European companies planning to expand in China per a separate survey. China's direct investment in the EU grew by nearly 30% year on year in 2025, while European investment in China remained stable. (*South China Morning Post*, March 25)
- **China**: China's total installed power generation capacity reached 3.95 trillion watts by the end of February 2026, up 15.9% year on year, according to the National Energy Administration. Solar capacity grew 33.2% to 1.23 trillion watts, while wind capacity rose 22.8% to 650 gigawatts. (*Xinhua*, March 25)
- **United Kingdom**: The UK government blocked a £1.5 billion wind turbine factory planned by Chinese manufacturer Ming Yang at Ardersier in the Scottish Highlands, citing national security concerns, ending a project that would have created 1,500 jobs. The decision came on the same day the Scottish and UK governments expressed support for a separate €250 million Vestas wind turbine component plant in Edinburgh that is expected to create 500 jobs. (*The Times*, March 25)
- **China**: More than 100 Chinese companies, including CATL and BYD, are racing to mass-produce perovskite solar cells, with multiple gigawatt-scale production facilities already coming online. China's UtmoLight launched what is believed to be the world's first gigawatt-scale perovskite facility in February 2025, while Kunshan GCL brought a 1 GW plant online in June and is expanding to 2 GW. (*Nikkei Asia*, March 22)
- **Brazil:** Brazil has secured up to 19 GW of electricity capacity through its largest-ever power auction, aimed at strengthening energy security amid growing reliance on renewables. The contracts covered thermal and hydro power, and are designed to provide backup generation when solar and wind output fluctuates. While the auction supports system stability, the inclusion of fossil fuel-based capacity has drawn criticism. (*Reuters*, March 18)
- **United States**: New York Governor Kathy Hochul will not support restarting the Indian Point nuclear plant north of New York City, after Energy Secretary Chris Wright urged its reopening. The site owner Holtec has been decommissioning the plant since its 2021 closure, and said it would pursue a restart only if political will and financing are in place, and will otherwise continue decommissioning. Hochul has instead directed the New York Power Authority to develop 1 gigawatt of new nuclear capacity in upstate New York. (*Reuters*, March 10)
- **China**: China's Huai'an Salt Cavern Compressed Air Energy Storage (CASE) project in Jiangsu Province has been fully commissioned, becoming the world's largest CAES station at 600 MW of installed capacity and 2,400 MWh of storage. The facility stores compressed air in underground salt caverns during low-demand periods and releases it to generate power at peak times, with an expected annual output of 792 million kWh and a total investment of $520 million. (*PR News*, March 4)
- **United States**: The Pentagon and Department of Energy airlifted a minivan-sized, 5-megawatt microreactor from California to Utah aboard a C-17 military aircraft, which is a first-of-its-kind transport. The unfueled reactor is built by startup Valar Atomics, and is expected to reach nuclear criticality by July 4. (*Associated Press*, February 21)

- **United Kingdom / United States**: UK Energy Secretary Ed Miliband and California Governor Gavin Newsom signed a Memorandum of Understanding on February 16 to deepen cooperation on clean energy investment, technology, and climate policy. The agreement aims to connect UK clean energy businesses with the Californian market, with Octopus Energy announcing nearly $1 billion in clean tech investment in California as part of the partnership. (UK Government, February 16)

- **Japan**: Japan's Tokyo Electric Power (TEPCO) restarted its Kashiwazaki-Kariwa nuclear power plant reactor No. 6 in January for the first time in about 14 years since the Fukushima disaster in 2011. The 1360 MW-capacity reactor was then immediately shut down the next day due to an alarm malfunction. It was eventually restarted on February 9, and will gradually reach 100% capacity to resume commercial operations on March 18. (*Reuters*, February 5; *France 24*, February 9)

- **United Kingdom**: UK startup RheEnergise has demonstrated a first-of-its-kind underground hydropower storage system near Plymouth, using a mineral-rich fluid more than twice as dense as water to generate electricity from gentle slopes that would be too shallow for conventional hydropower dams. The technology makes long-duration energy storage viable in far more locations and is backed by over £69 million in UK government funding. RheEnergise is now in talks with developers across Europe and North America to build the first commercial-scale project within three years. (*The Guardian*, January 27)

- **Australia**: Australia's largest coal-fired power plant, Eraring in New South Wales, will remain open until April 2029, two years longer than previously planned. The extension came as operator Origin Energy cited concerns about grid reliability and energy security, and followed warnings from the Australian Energy Market Operator about potential supply deficits. The two-year extension is intended to provide more time for renewables, storage, and transmission projects to come online. (*The Guardian*, January 19)

- **United Kingdom**: Britain's electricity mix became more carbon-intensive last year for the first time in four years, even though there has been record renewable production. Planned outages and the long-term shrinkage of the nuclear fleet pushed nuclear generation to its lowest level in over a decade, forcing greater reliance on gas to maintain supply when wind and solar were limited. While renewables continued to expand, the decrease in clean and firm capacity increased the difficulty of meeting the government's goal of a clean power system by 2030. (*Bloomberg*, January 7)

- **China**: China has begun construction of two CAP1000 pressurized water reactors, with first concrete poured on December 22 for unit 1 at the Bailong plant in Guangxi and unit 2 at the Lufeng plant in Guangdong. Both reactors were among 11 approved by China's State Council in August 2024, with the Bailong units expected to take 56 months to build at a combined investment of approximately RMB40 billion ($5.6 billion). (*World Nuclear News*, January 5)

Climate Finance

ESG Under Siege

What is Happening

- A federal judge struck down a 2021 Texas law that barred state investments in companies perceived as boycotting the fossil fuel industry, ruling it unconstitutional on First Amendment grounds. U.S. District Judge Alan Albright, a Trump appointee, found that the law penalized businesses for protected speech and was unconstitutionally vague. Texas officials said they would appeal the ruling. (*Reuters*, February 5)

- Vanguard agreed to pay $29.5 million to settle a Texas-led antitrust lawsuit alleging it conspired with BlackRock and State Street to pressure coal companies to cut output through green-energy initiatives. Texas Attorney General Ken Paxton said the settlement requires Vanguard to avoid prioritizing environmental, social or governance (ESG) goals over customer profits, though the firm did not agree to reduce its coal holdings. BlackRock and State Street continue to contest the lawsuit, denying the allegations and calling the case an attempt to rewrite antitrust law. (*The Wall Street Journal*, February 26)

- Norway's sovereign wealth fund made its first U.S. renewable energy investment, acquiring a 33.3% stake in a portfolio of 17 solar plants and five onshore wind facilities for $425 million. The portfolio, with a total enterprise value of around $2.6 billion and a combined capacity of 2.3 gigawatts, will be jointly held with British Columbia Investment Management Corporation and Brookfield through a newly formed company, Northview Energy, which may invest an additional $1.5 billion in further North American renewable assets. (*Reuters*, March 3)

- After BP announced a "strategy reset" to retreat from renewables to reprioritise fossil fuels, the company has received several climate-related shareholder resolutions and decided to exclude them from its 2026 annual meeting that's about to take place in April, after initially accepting. The resolutions demanded BP to outline its plan for protecting shareholder value in the event of declining oil and gas demand and set out net zero targets. One of the parties that filed a resolution threatened legal action. BP stated the resolution did not conform to legal requirements. (*IPE*, March 11)

- 91 U.S.-based ESG funds closed last year while only nine new ones launched. $21 billion was withdrawn from sustainable funds in the U.S. This is the largest outflow since Morningstar began tracking the data. Total U.S. sustainable fund assets still rose to $368 billion by year-end, up from $344 billion, driven by broader market gains. (*Bloomberg*, March 25)

Why it Matters

Environmental, social, and governance (ESG) metrics are not an ideological preference but an important risk assessment tool that identifies regulatory exposure, reputational vulnerability, physical climate risk, and governance failures. All of those categories of risk carry real financial consequences, regardless of how a portfolio is structured. In that capacity, ESG analysis belongs in any rigorous investment process alongside credit risk, liquidity risk, and other standard financial considerations, because ignoring a known risk category is not a neutral professional choice but an analytical gap. When ESG functions as an

investment filter, it is used to determine which assets a portfolio will or will not hold, and when held, what risks could be minimized through actions. How strictly that filter is applied is dependent on the client's mandate and investment horizon.

Texas's anti-ESG legislation misrepresents this distinction. The law framed restrictions on ESG-oriented investment as protection for investors against fund managers prioritizing ideology over returns, but the federal court's First Amendment ruling exposes the internal contradiction of that argument. Penalizing firms for applying a legitimate analytical framework does not make investment decisions more objective; it removes a tool that identifies and prices real financial risks. The Texan law does not protect investors from ideology. It substitutes one ideology for another, mandating a specific investment philosophy in the name of preventing one.

The fiduciary duty argument, frequently cited in anti-ESG legislation, rests on a similarly flawed premise. Fiduciary duty is not a universal instruction to maximize short-term returns. Rather, it is an obligation to maximize returns while catering to the specific mandate and preferences of the client. For a short-term investor who knowingly accepts ESG-flagged risks in pursuit of near-term gains, a fund manager should weigh ESG accordingly and remain within their fiduciary obligations.

Over a longer investment horizon, the risks that ESG metrics capture are more likely to materialize and affect returns. A company with poor environmental practices today faces a higher probability of regulatory penalties, stranded assets, or reputational damage over a decade than over a quarter. ESG analysis is particularly well suited with long-term return objectives. For a long-term institutional investor, ESG analysis is an appropriate use of tool, and therefore applying it as a primary screen is a direct fulfillment of fiduciary duty, not a violation. Overriding the analysis logic through legislation does not protect the investor but instead substitutes the government's investment philosophy for the client's.

Once risks are identified through analysis, investors have two practical options: exit the position or attempt to change the company. Shareholder activism is one of the most effective mechanisms for the latter, creating a direct accountability channel between a company and the people whose capital it depends on. The BP case and the antitrust lawsuit illustrate what happens when that channel is closed from the corporate side.

Combined with legislative restrictions on ESG-oriented investing, the picture that emerges is one in which investors are simultaneously prevented from expressing preferences through fund management and through direct engagement with the companies they own. The U.S. financial market has already seen a decline in ESG related funds as a result of such retreat. Both the analytical function and the accountability function of ESG-aligned investing are being compressed at once, and the First Amendment ruling points to why that compression is difficult to justify on legal or market grounds.

Norway's sovereign wealth fund illustrates what ESG-aligned long-term capital looks like when it operates freely. Its first U.S. renewable energy investment is a direct expression of a clearly defined long-term mandate, deploying substantial capital into productive infrastructure assets. The fund did not need legislative guidance to determine that this allocation served its clients. It applied its own analytical framework, consistent with its mandate, and acted accordingly. If Texas-style restrictions were applied

more broadly, capital of this kind would not abandon its investment philosophy. It would find markets that accommodate it.

Taken together, the cases reflect a coordinated narrowing of the tools available to ESG-aligned investors: legal and legislative pressure on firms that apply ESG frameworks and corporate structures blocking shareholder voice. Both pressures challenge the basic operating logic of long-term institutional investing. Financial markets function on the premise that investors can apply their own judgment, act on their own analysis, and hold companies accountable through ownership rights. Restricting any of those functions in the name of protecting investors requires a compelling justification, and the court ruling suggests that justification has not been made.

More on Climate Finance:

- **The United Kingdom:** UK oil refiners have warned that rising carbon tax costs under the country's UK Emissions Trading Scheme—combined with the government's decision not to extend the Carbon Border Adjustment Mechanism (CBAM) to refined fuels—could accelerate refinery closures. Industry groups argue that higher emissions costs place UK facilities at a disadvantage compared to international competitors that face no equivalent carbon pricing. The Treasury rejected including refined fuels in CBAM due to fears of increasing petrol prices for consumers. (*The Times*, March 20)
- **Global:** The COP30 Presidency has released its executive report with 56 consensus decisions and new mechanisms to sustain momentum beyond the summit. Key outcomes include the launch of the Baku–Belém roadmap targeting $1.3 trillion in climate finance alongside initiatives like the Global Implementation Accelerator to mobilize governments, businesses, and civil society. (*United Nations Climate Change*, March 19)
- **The United Kingdom:** The UK government has announced a more than 10% cut in overseas climate finance, reducing annual spending to around £2 billion over the next three years, as part of a broader shift to fund increased defence budgets. While the government argues the decision is driven by fiscal and security priorities and will be partially offset by mobilizing private investment, critics warn it undermines climate leadership and weakens support for developing countries. (*Climate Home News*, March 19)
- **France:** Several major companies—including Air France-KLM and hotelier Accor—are facing financial penalties after failing to meet emissions targets. These emission monitoring instruments tie borrowing costs to environmental performance, meaning missed targets trigger higher interest payments or redemption costs, though the actual financial impact remains relatively modest. (*Bloomberg*, February 24)
- **Saudi Arabia/Turkey**: Saudi Arabia signed an intergovernmental agreement with Turkey to invest around $2 billion in 2,000 megawatts of solar capacity in the Sivas and Karaman provinces, with a further 3,000 megawatts of wind and solar to be finalized in a later stage. The deal includes a 50% localization requirement and 25-year power purchase agreements at prices Turkey's energy minister described as record lows for renewable power in the country. (*Bloomberg*, February 4)
- **European Union:** Analysts have slightly raised their forecasts for EU Emissions Trading System (EU ETS) allowance price over the next few years, while warning of continued volatility. The allowances are projected to average about €92.65 per metric ton in 2026 and €107.29 in 2027, marginally higher than earlier

estimates. Prices have been fluctuating sharply early in 2026, and reached its highest record in January. Longer-term price increases are expected as the EU phases out free allowances, tightens emissions caps, and shifts demand toward industries needing to invest in decarbonization technologies. (*Reuters*, January 30)

- **Global**: Global investment in the energy transition rose 8% to a record $2.3 trillion in 2025, led by renewables, power grids, and electrified transportation, with Asia Pacific accounting for nearly half of all spending. However, the growth rate was the slowest since 2019, renewable investment actually fell 9.5% due to Chinese regulatory changes, and hydrogen and nuclear funding also declined. Bloomberg NEF estimates $5.2 trillion in annual investment will be needed by 2030 to stay on a net-zero trajectory, meaning current momentum remains far short of what the climate requires. (*Bloomberg*, January 26)
- **Africa, United Kingdom**: A new $1 billion climate finance fund, Allianz Credit Emerging Markets (ACE), was launched to support projects in emerging markets, with about 40% of its investments targeting renewable energy, agriculture and transportation in Africa. The fund is backed by the UK's British International Investment (BII) as anchor investor, and has secured $690 million so far and aims to help address Africa's estimated $3 trillion climate adaptation and mitigation needs. The launch comes as the US scales back climate finance, while the UK moves to expand its role, with BII committing at least 30% of its new investments to climate-related projects. (*Semafor*, January 21)

Climate Risks and Adaptation

Climate Change-Related Incidents are the New Norms in the Insurance Industry

What is Happening

- Australia soon experienced a more intense severe heatwave between January 26-30. Highest temperatures reached close to 50C°, breaking a record of 17 years. This time, the heatwaves led to wildfires that burnt about 10,000 hectares of land. (*Reuters*, January 27)
- Australia experienced its most severe heatwave since the Black Summer in 2019-20, with temperatures reaching up to 44C° in major cities. The first heatwave of 2026 has contributed to bushfires in Victoria that burned more than 300,000 hectares. Climate change has made this heatwave five times more likely to happen, and about 1.6C° hotter. (*ABC News*, January 5, *Reuters*, January 10)
- Despite the U.S. avoiding a direct hurricane hit in 2025, insured losses from smaller-scale disasters, including wildfires, severe thunderstorms, and floods, reached their highest level on record. The January Los Angeles wildfires were the single costliest event, while severe thunderstorms across the South and central U.S. added to the insured losses. The trend is significant for insurers as non-peak perils carry relatively high insurance coverage rates and are harder to model. (*The Wall Street Journal*, January 13)
- UK property insurance claims are expected to reach a record £6.1 billion in 2025, driven in large part by a sharp rise in weather-related damage. Weather-related claims due to incidents such as floods or storms are forecast to total about £1.6 billion, accounting for roughly 25% of all payouts and more than double the annual levels seen between 2017 and 2021. Another Deloitte survey shows that 84% of home insurance professionals now see climate change as a material risk to their business, underscoring the growing impact of weather-related claims on the sector. (Deloitte, February 11)
- Southern California is forecast to experience an unusually intense and prolonged heat event, with the National Weather Service warning of temperatures between 32°C and 38°C across the Los Angeles and Orange County areas from March 14-22, running 11 to 17 degrees above seasonal norms. A heat advisory is in effect for Los Angeles County, and numerous daily and all-time March records are broken. The NWS described the stretch as “an extremely rare, prolonged March heatwave.” (*CBS News*, March 10)
- California's FAIR Plan, the state's insurer of last resort, saw enrollment surge 43% between September 2024 and December 2025 as private insurers pulled back following major wildfires, with 14% of current policies now covering low fire-risk urban properties. In response, state legislators have introduced bills requiring insurers to cover fire-resilient homes in high-risk areas or face suspension, mandating guaranteed home replacement coverage, and expanding the FAIR Plan to offer comprehensive policies beyond fire insurance. Several major insurers have filed for rate increases in exchange for commitments to expand coverage in high-risk zones. (*Bloomberg*, March 15)

Why it Matters

The relationship between climate change and insurance is entering a breaking point. Extreme weather events are becoming more frequent and more damaging, which is exactly when demand for insurance

coverage rises. At the same time, insurers are retreating. The gap between the two is not a temporary market correction but a structural problem that will only widen.

Climate change does not simply raise average temperatures. It shifts the entire distribution of weather events, compressing what were once rare extremes into recurring ones. A heatwave that a given region might have experienced once a generation now arrives multiple times a decade, each time setting new records. Australia's consecutive record-breaking heat events this year are a case in point. The significance is not just the temperature readings; it is that the statistical models built on historical data no longer hold. This is a foundational problem for any industry that prices risk based on probability.

The insurance industry is the first sector being forced to confront this, and the pressure is showing up across markets simultaneously. Insured losses from weather events are reaching record levels in both the U.S. and UK, driven not just by major catastrophes but by the accumulation of smaller, frequent events that are harder to model and carry high coverage rates. California illustrates the further stage of this process. Private insurers are no longer just pulling back from areas with obvious fire exposure; they are retreating from urban properties previously considered low-risk. The risk environment has shifted enough that old categories have become unreliable. The market is repricing reality, and large portions of the population are being left without affordable coverage in the process.

This creates a cost that does not disappear simply because private insurers stop covering it. Governments are being left as absorbers of last resort, and the policy responses emerging reflect the difficulty of the position. Mandatory coverage requirements, as California is pursuing, keep private insurers in the market but do not reduce the underlying risk. They redistribute it. Resilience infrastructure takes the more durable approach: improving drainage systems, raising construction standards for fire and flood resistance, and reforming land use in high-exposure areas reduces the actual cost before it becomes an insurance claim. Both tools are necessary, but one addresses symptoms while the other addresses causes.

The insurance industry's current crisis is a leading indicator for the broader economy. Climate risk has moved from the tail of the probability distribution to its center. Industries, governments, and households that continue to treat it as an exceptional event will find themselves repeatedly caught off guard. The insurers did not choose to confront this first, the math forced them to. Other sectors should not wait for the same compulsion, as the shift in risk is already underway, and treating it as someone else's problem is no longer a viable position.

More on Climate Risks and Adaptation:

- **Kenya**: After facing extreme drought, Kenya experienced intense rainfall, with a month's worth of rain falling in Nairobi within 24 hours. The rain led to severe flooding that killed more than 40 people. Rapid and often unplanned urban development on floodplains has left cities like Nairobi poorly equipped to absorb heavy rainfall. (*Inside Climate News*, March 10)
- **East Africa**: A severe drought across Somalia, southeastern Ethiopia, and eastern Kenya since September 2025 has persisted into February 2026. The drought has led to emergency-level food insecurity, with 4.6 million people affected and over 135,000 displaced in Somalia alone. Scarce rainfall and temperatures more than 2°C above average have depleted soil moisture, devastated vegetation, and triggered rising

livestock mortality, record cereal prices, and acute child malnutrition. (European Commission, February 10)

- **Global**: The IOC is considering shifting future Winter Olympics to January and the Paralympic Winter Games to February, due to warmer temperatures that make March conditions increasingly unsuitable for snow sports. The proposal was raised at the body's eve-of-Olympics meeting in Milan, noting that late-season sun now poses a risk to snow quality. IOC members are scheduled to meet again in June to decide on a range of Olympic reforms under President Kirsty Coventry's "Fit For The Future" review program. (*Associated Press*, February 4)

- **The Netherlands**: A Dutch court ruled that the Netherlands discriminated against residents of the Caribbean island of Bonaire by failing to take adequate measures to protect them from climate change, ordering the government to develop a protection plan and set binding emissions reduction targets within 18 months. The case was brought by eight Bonaire residents with Greenpeace backing, and the court found that existing Dutch climate targets were non-binding and that the Netherlands was unlikely to meet its 2030 emissions goal. (*Associated Press*, January 28)

- **United States**: President Donald Trump questioned global warming on social media as much of the United States was experiencing a massive winter storm. More than a dozen scientists rejected his claims, stressing that short-term local weather does not contradict long-term global climate trends and noting that the past three years have been the warmest on record globally. Experts said similar or colder outbreaks have occurred historically, with far more record highs than record lows in recent years. (*Associated Press*, January 23)

- **United Kingdom**: The UK government warns that global ecosystem degradation poses serious risks to the UK's security and prosperity, citing "cascading risks" such as conflict, migration, pandemics, and economic instability. It identifies 6 critical regions as being on a pathway to collapse, including the Amazon, Congo basin, boreal forests, Southeast Asian reefs and mangroves, and the Himalayas. Collapses in those regions could threaten UK food security through supply shocks and rising global prices. (*BBC*, January 21)

- **Global**: International climate monitoring teams reported that 2025 was among the three hottest years on record, with global temperatures averaging 1.44 C。 above pre-industrial levels and nearly tied with 2023 and 2024. 2026 is predicted to be as hot as 2025. Scientists said the past three years suggest warming may be accelerating beyond previous linear trends, largely driven by human-caused greenhouse gas emissions. The last 11 years are now the hottest on record, and experts warned that rising temperatures are intensifying heat waves, storms, and wildfires, with the 1.5-degree warming threshold likely to be breached by the end of the decade. (*Associated Press*, January 14)

- **Nigeria**: Nigeria plans to raise up to 500 billion naira ($352 million) through green bonds, with proceeds designated for air quality, clean cooking fuels, and deforestation projects, according to Environment Minister Balarabe Abbas Lawal. The planned sale follows a series of oversubscribed green bond offerings, including last year's 50 billion-naira issuance that drew more than double the demand. (*Bloomberg*, January 13)

BCCC Commentary of the Quarter

Energy volatility is turning AI's power demand into a near term US challenge

By Zhangchen Wang
March 24, 2026

The combined effects of the rapid expansion of artificial intelligence (AI) and renewed volatility in global energy markets, amid geopolitical tensions centered on the Iran crisis, are bringing U.S. energy security strategy into a new phase. AI-driven electricity demand was previously framed as a medium-term challenge, with projections suggesting that data center energy demand could nearly double by around 2030. However, recent disruptions in global energy markets are pulling this issue into the realm of near-term strategic concern, as energy shocks could transmit into electricity markets and lead to sharp price volatility over a very short period of time. As electricity demand rises alongside growing instability in global energy markets, the key question is whether the U.S. power system can continue to expand in a stable, predictable, and scalable manner to support the AI industry, for which a stable electricity supply is effectively a lifeline.[1]

There is already broad consensus that AI will be one of the main drivers of electricity demand growth in the coming years, but projections of electricity supply expansion are not keeping pace. According to the U.S. Energy Information Administration (EIA), total U.S. electricity generation is expected to grow only modestly in the near term, at around 2% annually. By contrast, electricity consumption from data centers is projected to rise much more rapidly, as noted above. This divergence raises concerns not only about overall supply adequacy, but also about system reliability. Even if total generation expansion appears sufficient on paper, power systems must maintain adequate reserve margins to ensure stability under peak demand and unexpected disruptions. At the same time, electricity demand is also increasing in other sectors, including electrification of transport and industry, further tightening system capacity. Industry signals are already

[1] Image: Data center in California. (Royalty Free via Getty Images)

reflecting this imbalance. Experts and industry leaders have warned that U.S. energy infrastructure is not being built quickly enough to support AI-driven demand.

Meanwhile, recent geopolitical tensions involving Iran further amplify uncertainty in the energy outlook. Concerns over potential disruptions to key transit routes such as the Strait of Hormuz, as well as broader instability in a region central to global oil and gas supply, have contributed to rising and increased volatility in oil and natural gas prices. Given that natural gas accounts for roughly 43% of U.S. electricity generation, fluctuations in energy price inevitably affect the electricity market. While the current energy crisis has not directly translated into a domestic electricity crisis—partly due to the U.S.'s position as a major natural gas producer—it nevertheless exposes the system's sensitivity to external shocks. What had previously been seen as a longer-term concern—whether electricity supply can keep pace with AI-driven demand—now appears more immediate, as a system already operating with limited spare capacity becomes more vulnerable to external shocks such as geopolitical crisis.

The recent tension affected the natural gas production of Iran and Qatar—both major players in global natural gas supply—have already contributed to price surge in global gas markets. In Europe, benchmark natural gas prices have increased by roughly 50% to 60% since the onset of the Iran crisis, with even sharper short-term spikes observed during periods of escalation. Although less directly exposed to immediate supply disruptions, the U.S. is still closely connected to global energy markets through liquefied natural gas (LNG) trade. When prices rise in higher-demand regions such as Europe, U.S. exporters have strong incentives to redirect supply to the region—which is also aligned with U.S. interests. This export response can tighten domestic supply conditions and place upward pressure on U.S. natural gas prices and eventually cause electricity prices to increase.

Moreover, the current stage of AI development in the U.S. further amplifies the potential consequences of any disruption in electricity supply. The sector has already entered a phase of large-scale, capital-intensive investment, with over $1.6 trillion committed since 2013. These investments are long-term and largely irreversible, creating strong path dependency that constrains future pathways. Once built, such infrastructure must operate and iterate continuously to justify costs, making it difficult to slow or pause expansion without incurring significant economic losses.

At the same time, AI development follows a scale-driven trajectory, in which performance improvements are closely tied to increases in data, computing power, and model size. Insufficient investment in these areas risks slowing technological progress and undermining the returns needed to justify existing capital commitments. Conversely, maintaining competitive performance often requires continued expansion of computing capacity, which further increases electricity demand. In other words, without significant breakthroughs in efficiency, electricity demand will continue to rise alongside AI development.

Faced with this dilemma in AI development, the U.S. must not only expand electricity supply to support continued growth, but also ensure that future power systems remain resilient in the face of a "Black Swan

Event" such as the Iran crisis. Energy sources that are heavily exposed to global fuel markets may struggle to meet these requirements, as their costs and availability can fluctuate with geopolitical developments.

In this context, electricity sources that are less dependent on fuel inputs and more insulated from international market volatility take on greater strategic significance. Renewable energy, in particular, offers a comparatively stable cost structure once deployed and is not directly subject to the same geopolitical risks that affect globally traded fuels.

In addition, renewable energy and AI infrastructure share an important spatial characteristic: both require large amounts of land but are relatively flexible in location. This creates opportunities for co-location in regions with abundant and low-cost land, such as parts of the American Southwest. Co-developing power generation and data center infrastructure in these areas can help reduce transmission constraints and operating costs, while also enhancing system resilience in times of potential disruption.

At the same time, it is important to recognize the limits of this approach. Expanding renewable energy capacity is neither immediate nor without constraints. Deployment takes time, and renewable development in the U.S. continues to face challenges related to supply chains, critical materials, and grid integration. Moreover, energy is also only one of several constraints on AI development, alongside factors such as computing hardware, data availability, and regulatory uncertainty. Addressing the energy dimension alone will not guarantee the smooth expansion of AI.

Yet these limitations do not diminish the relative importance of the shift. Under current conditions—where electricity demand is rising rapidly, and exposure to global energy volatility remains a structural risk—reducing reliance on fuel-based uncertainty becomes a practical priority. Renewable energy stands out as a comparatively more reliable pathway for supporting continued expansion of AI.

This season's BCCC Commentary of the Quarter was researched and written by Zhangchen Wang, Research Associate at the Institute for China-America Studies.

Climate Change Project Profile: Small Modular Reactors (SMR)

A. Understanding Small Modular Reactors (SMR)

Nuclear energy is a type of clean, firm, and strategically secure energy with significant safety improvements along the way. It is one of the solutions towards an increasingly volatile global energy system. It is in this context that nuclear energy, and specifically a newer class of nuclear technology known as small modular reactors, has returned to the center of the conversation. Once sidelined by cost overruns, public anxiety, and the memory of high-profile accidents, nuclear power is now being reconsidered by governments, investors, and energy planners around the world as part of a serious long-term electricity strategy.[2]

Small modular reactors (SMRs) are a newer class of nuclear technology that translates these advantages into a more flexible and financially accessible form. SMRs have emerged as a compelling solution for large power users seeking stable, clean, dedicated generation. Governments and private investors around the world are taking notice, and momentum behind the technology is growing.

[2] Image: Aerial view of the construction site of Linglong-1 (ACP-100), the world's first onshore commercial small modular reactor (SMR), on July 4, 2024 in Changjiang Li Autonomous County, Hainan Province of China. (Photo by Wang Jian/VCG via Getty Images)

B. What is Small Modular Reactors (SMR)

Nuclear Energy

Nuclear energy is generated through a process called fission, in which the nucleus of a heavy atom is split apart after being struck by a neutron. The split releases an enormous amount of heat, which is used to produce steam, which in turn drives a turbine to generate electricity. The fundamental physics is not so different from a coal or gas plant.

Nuclear energy carries a set of advantages that are difficult to replicate with other low-carbon sources. It is firm power, meaning it generates electricity continuously regardless of weather conditions, unlike solar or wind, which depend on sun and wind availability. Its carbon emissions over its full lifecycle are among the lowest of any energy source, comparable to wind and significantly lower than all other fossil fuel generation methods. Nuclear plants are also designed for longevity, with many operating reactors in the United States having been licensed to run for 60 to 80 years. Together, these qualities make nuclear one of the few energy sources that can provide reliable, clean baseload power at scale.

The concerns surrounding nuclear power are also well known. The most visceral is the risk of a major accident, an association shaped by events at Three Mile Island, Chernobyl, and Fukushima. It is worth noting that modern reactor designs have substantially reduced the likelihood of such events, and that newer generations of reactors incorporate passive safety systems that do not require active human intervention to prevent a meltdown. The other major concern is nuclear waste. Spent nuclear fuel remains radioactive for tens of thousands of years and must be stored securely. This is a genuine challenge. But it is worth keeping in perspective: unlike the greenhouse gases produced by fossil fuels, which are released directly into the atmosphere with no containment, nuclear waste is solid, relatively compact, and can be isolated. Geological disposal, which involves storing waste in stable deep rock formations, is considered the leading long-term solution and is already in advanced planning stages in countries like Finland and Sweden.

Nuclear Energy Around the World

Nuclear power is a global industry with sharply divergent national attitudes. The United States remains the world’s largest producer of nuclear electricity in absolute terms, generating roughly a quarter of the world's nuclear output, though nuclear accounts for only about 19% of total U.S. electricity generation. France sits at the other extreme, where nuclear energy constitutes approximately 70% of the French electricity, making it one of the most nuclear-dependent grids in the world. China and Russia are also major producers, and both are expanding aggressively.

The Nuclear Energy Regulatory Framework in the United States

The United States has one of the oldest and most developed nuclear regulatory systems in the world. Its foundations trace back to the Atomic Energy Act of 1946, which established federal control over all aspects of nuclear materials and technology. The act was significantly revised in 1954 to allow for civilian nuclear power development, and the regulatory architecture that governs the industry today grew out of that framework.

Three federal agencies share responsibility for nuclear oversight. The Nuclear Regulatory Commission (NRC) is the primary regulatory body. It is an independent agency responsible for licensing nuclear reactors and materials, setting safety standards, and conducting inspections. Its independence from the executive branch has historically been considered a cornerstone of its credibility. The Department of Energy (DOE) covers nuclear materials, as well as research and development, weapons programs, and waste management. The DOE also oversees the nation's stockpile of nuclear fuel and is responsible for the development and deployment of new nuclear technologies. The Environmental Protection Agency (EPA) holds responsibility for setting radiation protection standards for the general public and the environment. Where the NRC focuses on the safety of nuclear facilities themselves, the EPA's mandate covers the broader question of radiation exposure and environmental impact.

Characteristics of an SMR

Small modular reactors are a newer class of nuclear technology designed to address many of the practical obstacles that have made conventional nuclear power plants difficult to build and finance. The International Atomic Energy Agency (IAEA) defines SMRs as reactors with an electrical output of up to 300 megawatts per unit, roughly one-third the capacity of a conventional large-scale reactor. An SMR is merely a small-scale nuclear reactor. The technologies it uses, such as cooling or fuel, are not much different than a traditional, full-size reactor. SMR being smaller in size does not reduce any of its nuclear characteristics, and should be treated with the same level of caution as any other nuclear facility, regardless of its size.

SMR vs. Traditional Nuclear Reactors

Understanding why small modular reactors have generated so much interest requires looking at what has historically made nuclear power difficult to build. Large conventional nuclear plants are engineering achievements of the highest order, but they come with a cost profile and construction timeline that have proven increasingly difficult to justify. They require billions of dollars in upfront capital, take a decade or more to complete, and must be built largely on-site, exposing projects to delays, cost overruns, and the compounding risks of long-horizon financing.

SMRs are designed to solve these problems. The "small" refers to physical size: these reactors occupy a fraction of the footprint of a traditional plant, which expands the range of viable sites and reduces land use requirements. The "modular" component is equally significant. SMR systems and components are designed to be manufactured in factories and transported in sections to their installation site. This shifts production away from bespoke on-site construction and into a more controlled manufacturing environment, where standardization and repetition can drive down costs over time, much as they have in other manufacturing-intensive industries.

Brief History and the Current State of SMR

Small modular reactors are still a young technology, and most designs remain in development or early

deployment stages. Russia, China, and Japan are the pioneers in this field. Out of the 4 operating SMRs in the world, the first is in Russia, 2 are in China, and the remaining 1 is in Japan. Most SMR designs globally remain at the development or early deployment stage, with commercial-scale adoption still in its early chapters.

C. How Small Modular Reactors (SMR) is Making a Difference

Growth of AI and Data Center Power Demand

The artificial intelligence (AI) industry has become one of the most energy-intensive sectors in the modern economy, and its appetite for power is growing faster than the grid can accommodate. Training large AI models and running the inference workloads that power commercial AI products requires data centers operating at enormous scale, drawing power continuously, around the clock, regardless of season or weather. Unlike a factory that can throttle production or a commercial building that dims at night, a data center running AI workloads needs a large, constant, and stable electricity supply.

The consequences are already visible. Data center expansion tied to the AI boom has placed significant strain on regional grids across the United States, contributing to electricity price increases that affect all consumers, not just the tech companies driving demand. The core problem is structural: new power generation capacity takes years to permit and build, while data center construction moves considerably faster. The result is a widening gap between supply and demand that has no short-term fix.

The Benefit of Nuclear

Besides the obvious benefit, nuclear fuel also offers insulation from supply shocks that fossil fuel alternatives lack. What sets nuclear apart is the scale of energy released from an extraordinarily small amount of fuel. Oil and gas prices are exposed to global market disruptions, geopolitical tensions, and resource depletion. Price fluctuations can be partially buffered by stockpiles, but even large reserves can be drawn down in days or weeks, making them a short-term measure at best. Nuclear fuel, by contrast, operates on a fundamentally different level of energy density. A single uranium fuel pellet roughly the size of a fingertip contains as much energy as approximately 807kg of coal, 677L of oil, or 481m^3 of natural gas. This means nuclear fuel stockpiles can sustain output over much longer horizons while occupying a fraction of the physical space. For a data center operator planning infrastructure over a 20 to 30-year horizon, that predictability is material.

SMRs to Power the Data Centers

The most direct solution to this problem is for large electricity consumers to stop relying on a shared grid that was not designed for their load profile and instead generate their own power. This is where SMRs become compelling and benefitting for all parties involved. The tech company and the affiliated data center operator that co-locates with a dedicated SMR unit gets firm, stable, carbon-free power with minimal exposure to grid volatility or transmission constraints. The clean energy additions reduce any possible

externalities prevalent under fossil-fuel generation methods. Other consumers on the public grid are no longer absorbing the price pressure from industrial-scale demand they have little stake in. Governments gain new private investment in clean power generation that diversifies national energy supply.

The factors combined make the investment finance easier for SMRs when investors are looking for a firm and clean electricity generation method. Rather than committing to the full capital outlay of a large plant upfront, a utility or private operator can deploy a single SMR unit and add capacity incrementally as demand grows. This modularity significantly lowers the initial financial commitment and makes nuclear a more realistic option for a wider range of operators, including private companies that would never consider financing a conventional plant.

SMRs in the U.S.

There has been no SMR built in the United States yet, but activity has been accelerating. The NRC completed its first-ever design certification for an SMR in 2023 for NuScale Power. As of early 2026, 19 SMR designs are listed as under active development in the U.S., and several developers are now moving beyond the drawing board and started construction processes.

D. The Latest on Nuclear Energy and Small Modular Reactors (SMR) and What it Means

Tech Companies Invest in Their Own Energy Needs

The Trump administration has responded to AI-driven grid strain on two fronts. At the World Economic Forum in Davos in January, President Trump urged tech executives to build their own power plants, claiming his administration could approve oil and gas plants in two weeks and nuclear projects in three weeks. That same month, the administration proposed an emergency auction within PJM Interconnection, the regional grid operator covering 14 states and the District of Columbia, that would require tech companies and other large customers to fund 15-year contracts for new power plant construction worth at least $15 billion. The proposal has drawn bipartisan support from governors across the PJM region.

The PJM proposal is a reasonable response to a structural problem mentioned in the previous section. Large technology companies have driven an enormous increase in electricity demand while relying on shared infrastructure they did not build and do not pay for at a rate that reflects their actual load. Requiring them to fund generation capacity directly is a logical correction, and the bipartisan gubernatorial support suggests it addresses a real and widely felt concern. Under the current trend of growing energy from the private sector, specifically the tech companies, large electricity customers to invest in their own energy needs should be the new model of generation infrastructure development.

Trump Administration Pushes for New Nuclear Generation Capacity

10 nuclear developers are actively building experimental reactors under the DOE's Reactor Pilot Program, which bypasses the standard NRC permitting process, with at least three companies targeting criticality by July 4. Five of the participants have broken ground and secured nuclear fuel supplies, while the DOE anticipates multiple reactors hitting the milestone on time. The program has also unlocked significant private funding, with participants collectively raising hundreds of millions of dollars in recent months. Meanwhile, as part of the U.S.-Japan trade deal, Japan is set to invest $40 billion into the U.S. SMR industry.

Both the Reactor Pilot Program and the Japanese investments represent the most concrete sign yet that the administration's nuclear ambitions are more than rhetoric. Capital is moving, ground is being broken, and timelines are being taken seriously. Fast tracking for those experimental projects show substantial political support and continued interest in the nuclear energy industry. For a technology that has spent years stuck at the design and permitting stage, this is meaningful progress. This administration is using a combination of tools available to foster an environment suitable for innovation and progress in the nuclear and SMR industry.

Trump Administration Deregulates the Nuclear Sector

The administration's push to accelerate nuclear development has been accompanied by a series of regulatory rollbacks. In January, Energy Secretary Chris Wright eliminated the Department of Energy's longstanding As Low As Reasonably Achievable (ALARA) radiation safety standard, which required nuclear operators to minimize radiation exposure to the greatest extent practicable, with no replacement standard announced. The administration also quietly overhauled safety rules governing experimental reactors, cutting requirements covering security, environmental protections, worker radiation limits, and accident investigation standards. The changes were shared with the private companies being regulated but were not made public, driven by an executive order directing the DOE to approve at least three new reactors by July 4, 2026. The NRC has since proposed cutting total inspection hours at nuclear plants by 40%, covering emergency preparedness, security, and radiation protection.

Despite the good momentum the nuclear energy industry is experiencing from the Trump administration, the institutional conditions and processes surrounding this progress should not be overlooked. SMRs remain unproven at commercial scale, and the United States has built only two new large-scale nuclear plants in the past two decades. Attempting to accelerate a new reactor class under timelines driven by a symbolic political deadline rather than technical readiness introduces risks that are difficult to overstate in an industry where the downside scenarios are uniquely severe. Nuclear energy's value proposition rests on the indispensable pillar of safety, which is highly dependent on the rigorous processes to ensure it. Eliminating those processes to reach a July 4 milestone is not deregulation in any meaningful sense.

All of those deregulation measures not only reduce the wait time for firms to get their plans approved, they reduce regulation from the entire chain of regulation from permitting to operation. While the wait for a

permit could hinder some developments of new reactors, regulations at the operation stage are the only safeguard of nuclear technology. What sounds like cutting red tape could eventually lead to a failure in governmental responsibility to properly govern the safety of nuclear energy. This transfers the associated risk from regulators to the public.

Even then, rendering a normally four- to five-year permitting process to only 3 weeks is a drastic decrease. The NRC's standard permitting process timeline exists for reasons grounded in engineering complexity and public safety, not bureaucratic inertia. It remains uncertain, to what extent the time reduction was due to cuts in bureaucracy, and how much comes from skipping the proper examination and testing that's required for safety. Presidential optimism should not prevail over an engineering schedule. The broader reorganization and placing the agency under White House budget oversight also threaten the NRC's independence, further putting nuclear safety at risk.

World Continue to Develop Nuclear Energy

Global nuclear ambitions are expanding in parallel. China's latest five-year plan sets a target of 110 gigawatts of nuclear capacity by 2030, a 76% increase from current levels, though actual construction has fallen short of both the 2020 and 2025 targets and reactor construction timelines of five to seven years make the deadline unlikely to be fully met. Nuclear's share of China's total electricity generation has actually declined in recent years, sitting below 5% last year. In Europe, European Commission President Ursula von der Leyen described the continent's decades-long retreat from nuclear power as a strategic mistake, pointing to geopolitical disruptions and fossil fuel supply risks as evidence. She announced a €200 million fund for nuclear innovation and a goal of deploying SMRs across the EU by 2030. French President Macron pushed for standardized reactor designs across member states to reduce the engineering variability that drives up costs. Even after the announcement made by Commission President von der Leyen, Germany still firmly rejects nuclear power.

The global picture reinforces what energy analysts have long argued: dependence on fossil fuels is not just an environmental liability, it is a strategic one. Energy diversification has moved from a policy aspiration to an economic and security imperative, and nuclear has moved with it. China's targets, even if unlikely to be met in full, signal sustained institutional commitment. Europe's reversal is more striking for its political character: countries that spent decades treating nuclear as a liability are now racing to deploy it. The question for the United States is whether it can channel that same momentum carefully enough to make it count.

E. What's Next for Small Modular Reactors (SMR)

The current energy landscape is pulling in the same direction from multiple angles. Increased volatility in fossil fuel markets, geopolitical disruptions, and growing calls for energy diversification are all pushing governments and investors toward alternatives. The AI boom has added a new and urgent dimension,

driving electricity demand faster than the grid can absorb and creating strong commercial incentives for large power users to seek dedicated, stable generation sources. Strained regional grids are reinforcing the case for colocation between large electricity consumers and their own generation facilities. All of these forces are converging to create an increasingly favorable environment for SMR development and deployment. The fact that nuclear is also a low-carbon generation method is, at this point, almost an additional bonus on top of a long list of practical advantages.

The future of SMRs is a genuinely bright one, and the trajectory is moving in the right direction. But the short-term picture is more complicated, and the distance between current momentum and commercial-scale deployment should not be underestimated.

One of the more underappreciated challenges is the sheer diversity of SMR designs currently in development. SMR is not a single technology but a broad category covering reactors that differ in cooling methods, fuel types, and materials. Most of these designs have never been built before, which means regulators must evaluate each one largely from scratch, a process that is inherently lengthy and cannot be responsibly compressed. The designs may be sound on paper, but unaccounted variables only surface during the review process, and that process exists precisely to find them. France's push for standardized reactor designs across EU member states points toward a more practical path: limiting the field of variants allows both developers and regulators to concentrate expertise and resources on a defined set of options, producing better outcomes for both deployment speed and safety.

The United States faces an additional structural challenge that standardization alone cannot solve. Decades of limited nuclear construction have left the domestic supply chain significantly atrophied. Some advanced SMR designs require high-assay low-enriched uranium, a fuel type with very limited domestic production capacity. The specialized engineering and construction workforce needed to build and operate these plants has aged and shrunk during the long gap in U.S. nuclear development. The gap between the administration’s ambitions and the country’s current industrial capacity is real. Rebuilding that capacity is possible, but it is a years-long undertaking that cannot be wished away by political timelines.

The international landscape offers a more encouraging picture. Russia, China, Japan, and several European nations are all actively developing SMR programs, and the pace of global investment in the technology is accelerating. This breadth of commitment across very different political and economic systems is itself a signal: SMRs are not a niche bet but a technology that serious energy planners around the world have concluded is worth pursuing. The growing field of developers and designs, while challenging from a regulatory standpoint, also reflects a genuinely competitive and innovative global industry finding its footing.

Through all of this, safety must remain the fixed point around which everything else is organized. There are multiple levels of safety, including operational safety, the safe storage of nuclear waste, and the security of continual finance. A reactor design that is able to properly turn on also needs regulatory

oversight on its operation and waste management across its full lifecycle. The public's right to live alongside a nuclear industry that is rigorously overseen does not diminish because deployment timelines are politically inconvenient.

Also, the firms investing in SMRs should also realize their safety responsibilities and ensure a continual financial input of the project. Although an SMR has a much lower upfront cost to invest in, it is still a sizable investment with a requirement for continuous long-term financial input due to operational costs. It is an ideal energy source to invest in for the AI industry, but investors should be aware that it is only a cheaper option of nuclear energy, the overall need for financial endowment is still high when compared to other forms of electricity generation. When considering private investments for a nuclear facility, it is important to notice that SMR as an investment project carries a set of characteristics that are different from other projects. The responsibility to ensure a safe, continual operation of a SMR does not reduce when the reactor gets smaller.

On both the regulator's and investors' sides, moving too fast is not only a safety risk; it is also an unrealistic proposition given where the industry currently stands. Rebuilding supply chains, training a new generation of nuclear workers, and reviewing genuinely novel reactor designs all take time that cannot be eliminated by executive order. The Trump administration deserves credit for generating momentum and political will around a technology that had long been stuck. Sustaining that momentum in a way that actually produces safe, operating reactors means resisting the temptation to treat urgency as a substitute for rigor. Right now, the SMR industry in the U.S. is still in its early stages, it is very likely that the industry will experience some unprecedented problems in the traditional, large-scale nuclear industry. It is important to note that what used to work may not suit the new industry.

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This season's Climate Change Project Profile on Small Modular Reactors (SMR) was primarily researched and written by Yunchao Mao, Part-time Research Assistant at the Institute for China-America Studies.

Climate Change Actor Profile: International Energy Agency (IEA) Ministerial Meeting

A. Understanding IEA Ministerial Meeting

The IEA Ministerial Meeting is the International Energy Agency's highest-level political forum, convened on a biennial basis to provide strategic direction to the Agency and align member governments on major energy priorities. The IEA was created in 1974 in response to the 1973–1974 oil crisis, when oil embargoes and supply disruptions exposed the vulnerability of industrialized economies to imported oil. From the outset, the Agency's central mission was to strengthen collective energy security. Within that framework, the Ministerial Meeting emerged as the forum through which member governments could periodically review risks, update common priorities, and instruct the Secretariat on the direction of its work.[3]

The role of the IEA Ministerial Meeting is evolving alongside the transformation of the global energy system. While energy security remains its central organizing principle, what constitutes energy is expanding beyond fuels to include supply chains, critical materials, manufacturing, and technological systems that include both traditional and clean energy. The 2026 Ministerial Meeting points toward a move to governing increasingly complex and interconnected systems, where energy security, economic considerations, and climate objectives become deeply intertwined. In this context, the Meeting is an arena where the structure and direction of global energy governance are actively shaped.

[3] Image: Family Photo of the 2026 IEA Ministerial Meeting. (Source: Official International Energy Agency Photo, CC BY 4.0)

B. What is IEA Ministerial Meeting

Established to Guide Collective Energy Security Coordination

The IEA Ministerial Meeting is a governing platform tied to the IEA's original objective of managing shared energy insecurity among major consuming economies. It is designed to sit above the Agency's technical and analytical work. It does not function like a treaty body that adopts binding rules, nor is it simply a public dialogue event for symbolic purposes. Rather, it serves as the highest political-level mechanism through which governments set broad priorities for the IEA's agenda. It operates through Chair Summaries and ministerial declarations that articulate shared priorities and provide guidance to both major economies facing shared energy challenges and the IEA Secretariat.

Addressing All System-Level Energy Challenges

Although the Ministerial Meeting grew out of an oil security institution, its functional role has broadened alongside changes in the global energy system to address all kinds of energy challenges. The IEA still describes energy security as a core mission, and its oil emergency response system remains one of the Agency's defining tools. Nevertheless, the agency agrees that energy security is no longer understood in narrowly oil-centered terms. In recent years, the Agency has increasingly framed security around wider system resilience, including electricity reliability, fuel diversity, infrastructure vulnerability, and exposure to geopolitical or trade disruption. The Ministerial Meeting reflects that shift and offers the venue where governments can discuss the wider architecture of energy stability under conditions of technological change and market transformation.

This broader mandate is visible in the kinds of issues now addressed through the Meeting. The 2026 Ministerial covered critical minerals security, clean cooking and energy access, energy innovation, nuclear energy, electricity demand linked to AI, and institutional expansion through new member and partner pathways, demonstrating the Meeting's determination to address various energy-related issues. Additionally, the Meeting also shows that traditional energy security is expanding into broader dimensions and domains: the stability of supply chains, the resilience of power systems, the availability of transition materials, and the coordination of technology deployment are increasingly treated as governance problems equally critical to oil and gas security.

Expanding into Climate Change and Renewable Energy Governance Areas

The Ministerial Meeting is not a formal climate institution, and it does not set emissions targets in the way a UN climate body would. Nevertheless, it has substantial impacts on climate governance because of its participation in shaping emission reduction agendas and identifying more feasible low-carbon transition options. It is particularly important because many barriers to decarbonization are the result of constraints such as limitations in technology, finance, logistics, and political coordination.

Its growing relevance on climate change and renewable energy can be seen particularly clearly in two

areas. First, the Meeting has moved climate-adjacent supply chain issues, especially critical minerals, toward the center of energy governance. In 2026, ministers adopted a dedicated declaration supporting stronger IEA work on critical minerals security. Second, the Meeting has expanded into issues such as clean cooking and clean energy access. In 2026, ministers supported the integration of the Clean Cooking Alliance into the IEA as the absence of clean cooking led to the premature deaths of millions of people annually and serious deforestation and carbon leakage problems.

C. *How IEA Ministerial Meeting is Making a Difference*

Framing Energy Governance Priorities

The IEA Ministerial Meeting plays a central role in redefining how governments understand energy governance. Historically, energy policy coordination focused on oil, and worked within a relatively narrow framework of supply security. Over time, the Meeting has broadened its perspective, addressing energy challenges in a more systematic and comprehensive manner. Today, energy security is formally considered alongside affordability and sustainability, reflecting an integrated approach in which these objectives are treated as interdependent rather than competing priorities. This evolution suggests that the Meeting is no longer concerned solely with the sources of energy—a shift that partly reflects the declining immediacy of security risks as the impact of past oil crises has receded. More importantly, it demonstrates the Meeting's capacity to adapt alongside changing global conditions. It now places greater emphasis on the economic dimension of energy as well as its long-term climate considerations.

Identifying and Institutionalizing New Domains

Beyond constantly upgrading priorities as needed, the Ministerial Meeting also shapes governance by elevating new domains into the core of international energy coordination. Issues that were previously treated as technical, sector-specific, or secondary—such as supply chains and critical minerals—are increasingly integrated into the Meeting's agenda. As clean energy technologies expand, minerals such as lithium, cobalt, and rare earth elements have become essential inputs for batteries, grids, and other low-carbon systems. The Ministerial Meeting has contributed to bringing these supply chain issues into the center of energy governance discussions, including even the material foundations of energy transition.

The Meeting also works to align its role with evolving national policy agendas among major economies. While it does not impose binding commitments, it facilitates convergence in how governments interpret risks, prioritize investments, and approach long-term energy transitions. This coordination helps maintain a baseline level of consistency on key global issues, which becomes increasingly important as energy systems—especially those of clean energies—grow more interconnected and complex. Although countries continue to pursue different pathways in balancing energy security and decarbonization, the Meeting plays an important institutional role in promoting a degree of alignment in areas such as emissions standards, critical minerals supply, and the design and manufacturing frameworks of renewable energy technologies, thereby supporting more coherent overall development.

Exposing Political Contestation within Energy and Climate Governance

The Meeting is also a platform where political tensions are revealed. These tensions do not take the form of formal disputes or negotiated outcomes, but are embedded in competing policy priorities among major economies, particularly in areas where energy security, economic interests, and climate objectives intersect. One of the most visible contests is the one between energy security and net-zero goals. Many IEA members, especially the European ones, continue to emphasize the urgency of decarbonization. On the other hand, many others are concerned about the pace and feasibility of rapid energy transition. The IEA served as a platform where different interpretations and concerns could coexist and be discussed.

D. The Latest on IEA Ministerial Meeting and What it Means

Critical Minerals Move to the Center of Energy Governance

The 2026 IEA Ministerial Meeting elevated critical minerals to a central pillar of international energy security governance. The Meeting consolidated the IEA's Critical Minerals Security Programme as the primary platform for coordination among member countries, focusing on three interrelated priorities: preparedness for supply disruptions, diversification of supply chains, and the strengthening of data and policy coordination capacities. The Ministerial Declaration recognizes that access to critical minerals is increasingly subject to geopolitical leverage such as export restrictions, and calls for improved collective readiness to respond to such risks through enhanced market monitoring, rapid assessment capabilities, and coordinated responses to supply shocks. It also introduces more systematic use of scenario-based exercises to simulate disruptions.

At the structural level, the Meeting places particular emphasis on diversifying supply chains beyond upstream extraction, with a strong focus on refining and processing capacities, which are identified as key bottlenecks in current global markets. The Meeting believes risks stem not only from resource availability but from concentration in midstream and downstream segments, limited investment in processing infrastructure, and insufficient transparency across supply networks. In parallel, the Meeting strengthens the role of the IEA as a data and coordination hub by expanding its Critical Minerals Information Dashboard and enhancing secure information-sharing mechanisms among participants, allowing governments to better identify diversification opportunities and align policy responses.

The implications of these developments are significant. First, critical minerals are now firmly embedded within the core logic of energy security, marking a transition from a climate-adjacent issue to a strategic priority that intersects with industrial policy, technological competition, and geopolitical risk. Second, the focus of policy is shifting from resource ownership to control over processing capacity, logistics, and information, suggesting that future competition will increasingly center on midstream capabilities and system-level coordination rather than upstream extraction alone. Third, the Meeting reinforces a trajectory toward supply chain diversification without full decoupling, promoting partnerships and risk distribution rather than outright separation of existing networks. Finally, while resource-rich developing economies are

positioned as key partners in this evolving system, the emphasis on reliability, transparency, and responsible production raises the threshold for participation.

Net Zero Debate Brings Policy Divergence

Another tension at the 2026 IEA Ministerial Meeting emerged over the role of net-zero emissions targets.. The United States openly challenged the IEA's use of net-zero scenarios as a guiding framework, arguing that such targets are unrealistic and risk distorting energy policy by prioritizing climate objectives over energy security and affordability. U.S. Energy Secretary Chris Wright went as far as to signal that continued American participation in the agency could depend on scaling back its emphasis on net-zero pathways. European governments, by contrast, reaffirmed their commitment to decarbonization and defended the integration of climate objectives into energy policymaking. For many European members, the transition to clean energy is not separate from energy security but rather a long-term solution to it, particularly in the context of reducing dependence on imported fossil fuels. This divergence prevented the adoption of a unified communiqué, with the meeting concluding instead with a chair's summary that reflected only partial consensus.

This disagreement signals that the integration of net-zero targets into the core of international energy governance is no longer a settled consensus among advanced economies. More fundamentally, it reflects competing visions of what institutions like the IEA should do: whether they should act primarily as neutral providers of energy data and crisis coordination, or as platforms that actively shape the direction of global energy transitions. As a result, future IEA outputs may face increasing political scrutiny, and the balance between energy security and climate ambition is likely to remain a contested space within the institution.

Energy Access Moved into the Core Framework

Another major development was the integration of energy access of developing countries into the central agenda of the Ministerial Meeting. Ministers supported the incorporation of the Clean Cooking Alliance into the IEA as a special initiative, signaling a more formal institutional commitment to addressing energy poverty. The initiative aims to accelerate the transition from traditional biomass—such as wood and charcoal—to cleaner cooking solutions. This transition is critical not only for emissions reduction, but also for public health: household air pollution from traditional cooking practices is a major contributor to respiratory diseases, particularly among women and children in developing countries. According to IEA estimates, nearly 2 billion people worldwide still lack access to clean cooking, with the majority concentrated in sub-Saharan Africa. Rather than treating it as a development issue, the Ministerial Meeting positions clean cooking within the broader architecture of energy transitions, linking it to investment frameworks, technology deployment, and international coordination. This suggests that addressing energy poverty is increasingly viewed as part of the same system-level challenge as decarbonization, rather than as a separate policy track. This also suggests that global energy transition must put questions of affordability and accessibility into consideration.

Moving towards Global Governance

The 2026 Ministerial Meeting also underscored ongoing efforts to expand the IEA's global reach. There is a growing recognition that energy governance cannot remain limited to a relatively small group of advanced economies. Over the past decade, the IEA has sought to deepen engagement with major emerging economies, including Brazil, India, and Vietnam, while advancing accession processes for countries such as Colombia. These efforts were reaffirmed during the Meeting.

However, these expansion efforts also reveal the structural limitations of the current system. While participation has broadened, it remains uneven, and some of the most influential actors in global energy markets are still not fully integrated into the IEA's decision-making framework. This is particularly evident in the case of China, which plays a central role across multiple dimensions of the modern energy system, including renewable energy manufacturing, battery production, and critical minerals processing. As the global energy transition accelerates, these sectors are becoming an increasingly dominant part of what constitutes "energy" itself.

E. What's Next for IEA Ministerial Meeting

The 2026 IEA Ministerial Meeting makes clear that energy security remains the central organizing principle of global energy governance. What is changing is how that security is defined and operationalized. Increasingly, the core concern extends from the security of fuel supply to the resilience of supply chains that underpin both traditional and emerging energy systems.

For conventional energy, security has historically focused on supply routes, transportation chokepoints, and the reliability of upstream production. These concerns remain unchanged. At the same time, the growing importance of renewable energy is reshaping the landscape of energy security. Clean energy also depends on access to critical inputs such as critical minerals and its manufacturing. Supply chain security has emerged as a common challenge shared by both traditional and renewable energy systems.

This shift carries important implications for geopolitics and international economic relations. As supply chains become more central to energy systems, competition over resources, processing capacity, and technological leadership is likely to intensify. At the same time, the stability of these systems increasingly depends on cooperation, transparency, and coordination across borders. Managing this balance between competition and interdependence will be critical for maintaining both energy security and the momentum of the energy transition. The 2026 Ministerial Meeting reflects a clear awareness of these challenges. However, its ability to address them remains inherently limited. Therefore, it should continue to provide a space for dialogue, shape shared problem definitions, and encourage alignment in how risks are understood and managed. Expanding participation and deepening engagement with a broader range of countries will be increasingly important in this regard. China, for example, plays a central role in renewable energy manufacturing, battery production, and critical minerals processing, and its influence is likely to grow as these sectors become more dominant within global energy systems. Yet its integration into the IEA's institutional framework is still weak. This disconnect suggests that existing governance

structures may struggle to fully capture the realities of a more complex and technology-driven energy landscape.

At the same time, the Meeting highlights a delicate balance in advancing the energy transition. While there is strong momentum behind renewable energy and climate objectives, the transition process itself may generate new concerns around affordability and security, particularly in countries that face higher costs, weaker infrastructure, or underdeveloped renewable technologies. If these concerns are not adequately addressed, they risk slowing progress or even undermining cooperation. The role of the IEA is not only to promote long-term goals, but also to help mediate between competing priorities and reduce the perceived risks associated with transition pathways.

Main Sources & Expanded Reading

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2026 IEA Ministerial Chair's Summary, International Energy Agency, February 19, 2026
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2026 IEA Ministerial Declaration Supporting the IEA's Work on Critical Minerals Security, International Energy Agency, February 19, 2026
IEA Ministers elevate Agency's Critical Minerals Security Programme as key international platform for mineral security, International Energy Agency, February 19, 2026
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This season's Climate Change Actor Profile on IEA Ministerial Meeting was primarily researched and written by Zhangchen Wang, Research Associate at the Institute for China-America Studies.

Climate Research, Analysis, and Beyond

Scientific Research Results & Releases

January 2026

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- Research Article: Compound Dry-and-Hot Extremes Exacerbate Income Inequality and Poverty in Europe, *Global Environmental Change*, Vol. 97
- Journal Article: Global Gridded Dataset of Heating and Cooling Degree Days under Climate Change Scenarios, *Nature Sustainability*, 2026
- Journal Article: Body Condition Among Svalbard Polar Bears *Ursus Maritimus* During A Period of Rapid Loss of Sea Ice, *Sci Rep* 16, 2182 (2026)
- Research Article: Mangrove Restoration and Coastal Flood Adaptation: A Global Perspective on the Potential for Hybrid Coastal Defenses, *Proc. Natl. Acad. Sci. U.S.A.* 123 (4) e2510980123
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- Journal Article: Blue Carbon Ecosystems and Coral Reefs as Coupled Nature-Based Climate Solutions, *nature sustainability*
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- Research Letter: Climate Change Will Enhance Hypercapnic Hypoxia Threatening Mangrove Habitats, *Geophysical Research Letters*, Vol.53 Issue 4
- Research Article: Annual Snow Accumulation in the Antarctic Peninsula and the West Antarctica Ice Sheet from 1979 to 2008, *Journal of Climate*, Vol.39, Issue 5
- Research Article: Long-Term Warming Reduces Fish Biomass, but Heatwaves Shift It, *Nature Ecology & Evolution*

March 2026

- Journal Article: Global Warming Has Accelerated Significantly, *Geophysical Research Letters*, Vol. 53
- Journal Article: Assessing The Warming Biases in CMIP6 Models: The Roles of Fast Response and Cumulative Effects to External Forcings, *npj Climate and Atmospheric Science*
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- Research Article: Marine Heatwaves Variability and Trends in the Patagonian Shelf, *Ocean Science*, Vol.22, Issue 2
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- Research Article: The Private Solution Trap in Collective Action Problems Across 34 Nations, *Proceedings of the National Academy of Sciences, Environmental Science*, Vol.123, No.12

Third-Party Views on Climate Change

Science, skepticism, and lived experience are reshaping how people understand climate change.

- The Climate Question That Economists Cannot Answer (*The Atlantic*, January 14)
- Melting Ice May Raise Greenland's Value. Trump's Fight May Be Just The Start. (*The Washington Post*, January 18)
- Climate Change Eclipses La Niña Cooling in Australia to Drive Extreme Heatwave and Heightened Fire Risk (World Weather Attribution, January 22)
- In Graphs: How Extreme Heat Will Affect Urban Health (*Dialogue Earth*, February 4)
- A Climate of Exhaustion (*The Wall Street Journal*, February 13)
- CO2 Is Simply Not A Danger to Human Health, and It's Actively Good for Crops (*The Telegraph*, February 13)
- The Winter Olympics aren't immune to climate change. Here's how the Games could change (World Economic Forum, February 18)
- Winter Is One of the Last Threads Holding Everything in Place (*The New York Times*, February 24)
- Testing The Waters: Can Pumping Chemicals into The Ocean Help Stop Global Heating? (*The Guardian*, March 10)

U.S. climate backsliding is driving rising emissions and renewed global concern.

- Preliminary US Greenhouse Gas Emissions Estimates for 2025 (Rhodium Group, January 13)
- America Is Missing the Real Problem in the Arctic (*Bloomberg*, January 14)
- Trump Is Obsessed With Oil, but Chinese Batteries Will Soon Run the World (*The New York Times*, January 19)
- The More Europe Relies on the US For Energy, The More It's Vulnerable to Pressure by Trump (*Climate Home News*, February 17)
- Brace for Trump's Brave New World of 1.7°c Global Warming (*The Telegraph*, February 17)
- Big Oil Is Urging Trump to Stop Battle on Offshore Wind (*The Wall Street Journal*, February 26)
- U.S. Power-Plant Pollution Rose Sharply in 2025 (*The Wall Street Journal*, February 26)
- Coal Pollution Spiked After Trump Administration's "Free Pass to Pollute" (Natural Resources Defense Council, February 26)
- Trump Has Launched an Unprecedented Assault on The Environment. Where's The Pushback? (*The Guardian*, March 4)

Clean energy continues to move forward amid policy gaps and geopolitical uncertainties.

- Will Great Britain's Offshore Wind Subsidy Auction Mean Lower Energy Bills? (*The Guardian*, January 14)
- Global Solar Council: Africa Records Its Fastest Year of Solar Growth as Installations Rise 54% Year-on-Year (Global Solar Council, February 2)
- Special Report 04/2026: Critical Raw Materials for The Energy Transition – Not A Rock-Solid Policy (European Court of Auditors, February 2)
- What We Need to See in The Roadmap to Transition Away from Fossil Fuels (*Climate Home News*, February 17)
- China Cashes in on Clean Energy as Trump Clings to Coal (*Deutsche Welle*, February 23)
- Don't Look Now, but the Green Transition Is Still Happening (*The New York Times*, February 25)
- How Would The Iran Crisis Play Out in A World Powered by Renewables Not Fossil Fuels? (*The Conversation*, March 4)
- The Guardian View on EV Charging: China Took The Right Lessons From Britain's Past (*The Guardian*, March

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- China's Solar Industry Is in Upheaval—The Effects Will Be Global (Center for Strategic & International Studies, March 12)
- Wind Power is far from 'Woke' (*The Spectator*, March 25)
- Iran War Is Pushing Consumers to Break Up With Fossil Fuels (*Bloomberg*, March 26)

The race for clean energy is becoming a contest over technology and resources.
- If Geoengineering Is Ever Deployed in A Climate Emergency, Transparency Is Key (*The Guardian*, January 8)
- America's Nuclear Future (*The Washington Post*, February 14)
- The Falling Cost Gap between EU and Chinese Batteries (Transport and Environment, March 2)
- Does Chinese Investment in US Clean Energy Sectors Help or Hurt America? (Brookings Institution, March 12)
- What Honda's EV Retreat Means for the Future of Clean Tech (*The Diplomat*, March 23)
- Electrostates vs. Petrostates (*Foreign Policy*, March 23)
- America's Dangerous Pursuit of Critical-Mineral Dominance (*The Economist*, March 26)

New forms of climate governance are emerging in a fragmented global landscape.
- On Climate, India, China Are Doing Their Fair Share (*The Indian Express*, January 13)
- Davos 2026 Was Not A Meeting, but A Mirror Reflecting A Broken World (*Reuters*, January 27)
- Businesses Can Either Lead Transformative Change or Risk Extinction All Businesses Depend on and Impact Nature (IPBES, February 9)
- India's New Climate Statecraft (Council on Foreign Relations, February 17)
- Climate Litigation's Impact Evaluation Problem (The London School of Economics and Political Science, March 9)
- A Nature-Based Solution to Save The Mekong Delta's Water Future (*Mongabay*, March 26)

Climate Finance is seeing signs of retreat.
- How Wall Street Turned Its Back on Climate Change (*The New York Times*, January 18)
- Gavin Newsom's Climate Tax Hike (*The Wall Street Journal*, March 4)
- UK Is 'Halving' Its Climate Finance for Developing Countries (*Climate Finance*, March 27)

Climate-Focused Conferences & Events

Multinational Conferences & Global Forums

Climate Adaptation and Industrial Resilience Forum

United Nations Industrial Development Organization (UNIDO)
February 18 - February 19
Vienna, Austria

- From the Organizer: "Anchored in UNIDO's Climate Action Plan 2025–2029, it focuses on practical solutions that keep factories running, protect jobs, and strengthen value chains as climate risks intensify."
- Primary Themes: Innovation; Inclusion; Investment
- Forum Outcome: "One key outcome was a shift in the finance conversation from'needs' to 'numbers', as climate funds, the private sector, and government representatives explored how to align industrial adaptation priorities with concrete funding windows and instruments."

12th annual Sustainability Week

The Economist
March 2 - March 4
London, United Kingdom

- From the Organizer: "The 11th annual Sustainability Week will deliver vital information that you can use to move faster on reducing emissions and improving your environmental impact in 2026."
- Primary Themes: Decarbonising business; Finance; AI and sustainability; Materials and construction; Carbon capture and credits; Procurement and supply chains; Biodiversity and natural capital congress
- Forum Outcome: "We bring an audience of chief sustainability officers, chief procurement officers, chief financial officers and chief executives together to drive action on sustainability. Our mission is to help businesses become sustainable faster."

Buildings and Climate Global Forum

United Nations Environment Programme (UNEP)
March 7 - March 8
London, United Kingdom

- From the Organizer: "The Forum gathered for the first time ministers and high-level representatives of key organisations, to initiate a new impetus in international collaboration for building decarbonisation and resilience after the Conference of the Parties (COP) 28."
- Primary Themes: Decarbonising business; Finance; AI and sustainability; Materials and construction; Carbon capture and credits; Procurement and supply chains; Biodiversity and natural capital congress
- Forum Outcome: "The Forum followed the successful launch of the Buildings Breakthrough, supported by 28 governments, the European Commission, and 19 international initiatives at COP28 in Dubai on 6 December 2023."

Global Forum on the Environment and Climate Change

Organisation for Economic Co-operation and Development (OECD) and International Energy Agency (IEA)
March 17 - March 18
Paris, France

- From the Organizer: "The Global Forum on the Environment and Climate Change, jointly organised by the

OECD and the IEA, aims to promote dialogue, and enhance understanding among a wide range of countries on key issues relevant to the international climate change negotiations and implementation of the Paris Agreement."
- Primary Themes: climate change, holistic approach
- Forum Outcome: "The sessions in this global forum event focused on preparations for the second Global Stocktake (GST) and on unpacking the COP30 decision on the Global Goal on Adaptation (GGA)."

2026 Climate Leadership Conference Carbon Disclosure and Decarbonization Forum
The Climate Registry
March 19 - March 20
Pasadena, United States

- From the Organizer: "The Forum will be a premier gathering dedicated to advancing transparent, high-quality greenhouse gas emissions reporting by providing sustainability professionals, novice and experienced, with the state of play of policies and best practices to support their decarbonization journey through a changing landscape."
- Primary Themes: corporate reporting, decarbonization, carbon disclosure, climate action
- Forum Outcome: "Through expert panels, practical workshops, and cross-sector conversations, the Forum will empower participants to strengthen compliance, enhance sustainability performance, and accelerate climate action and the transition to a low-carbon future."

Public Events & Panel Discussions

-Upcoming Events-

AI for Food Security Forum
Event by Center for Strategic and International Studies | April 30

The Latest Trends in Global Emissions
Event by World Resource Institute | April 28

Climate Action, Close to Home
Event by Center for American Progress | April 21

Climate Finance as a Tool for Global Stability
Event by Stimson Center | April 21

Accelerating the Transition: Energy Efficiency and Energy-Efficient Design
Event by Rocky Mountain Institute | April 18

Investing in Africa Forum
Event by Atlantic Council | April 16

Introduction to Cool Cities Lab: Assessing Heat Risks and Prioritizing Cooling Solutions (Option 1/2)
Event by World Resource Institute | April 15

Financing Innovations in Climate Mobility
Event by Carnegie Endowment for International Peace | April 14

The Futures Summit: A New Era of Development Cooperation
Event by Center for Strategic and International Studies | April 10

Game changers: Cures for 21st century biological threats
Event by Atlantic Council | April 10

Webinar—Driving Economic Development with Affordable Power
Event by Rocky Mountain Institute | April 9

Global Prosperity Forum
Event by Atlantic Council | April 9

Housing and the Climate Nexus: Pathways to Resilient, Affordable, and Low-Carbon Urban Futures in Africa
Event by World Resource Institute | April 9

Crude Diplomacy: Oil and the Iran War
Event by Carnegie Endowment for International Peace | April 7

How the War in Iran is Impacting Global Energy Infrastructure | All About the Base
Event by Center for Strategic and International Studies | April 6

-Past Events-

CBAM, Green Procurement, and the Importance of Product-level Emissions Standards for Industrial Decarbonization Policy
Event by World Resource Institute | March 27

How Critical Are Critical Minerals in The Brazil-UU Economic Relationship?
Event by The Peterson Institute for International Economics | March 25

Measuring U.S. Energy Security
Event by Center for Strategic and International Studies | March 19

Reimagining Homeowners Insurance Amid Growing Climate Risk
Event by The Hamilton Project | March 18

Asia at the Forefront: Market-Based Solutions for Mitigating Climate Change
Event by Asia Society | March 10

How Community Benefit Agreements Can Mitigate Public Concerns about Data Centers
Event by The Brookings Institution | February 17

On the Road to 1.3 Trillion- Going Forward How Do We Improve Transparency, Participation and Accountability in Climate Finance?
Event by World Resource Institute | February 11

Safe, Healthy, and Resilient Homes: Building Resilience Together

Event by The Brookings Institution | February 11

Exploring Climate Watch
Event by World Resource Institute | February 5

Deep Dive Into New Research: Despite 'Carbon Neutral' Certifications, Beef Emissions Can Never Be Low
Event by World Resource Institute | February 3

Stories to Watch 2026
Event by World Resource Institute | January 29

Launching the C-PACE Embodied Carbon Model Policy Primer
Event by Rocky Mountain Institute | January 29

Sector-Specific Deep Dives on Low-Carbon Procurement
Event by Rocky Mountain Institute | January 14

Powering Prosperity and the New Electricity Economy
Event by American Enterprise Institute | January 14

Turning Loss and Damage Into Action: Financing Climate Mobility via the Loss and Damage Fund
Event by Carnegie Endowment for International Peace | January 13

2026 in the Americas: Stories that may drive the news
Event by Atlantic Council | January 12

Energy Trends Across APEC: Insights from APERC's 9th Energy Outlook
Event by Center for Strategic and International Studies | January 8

ICAS BCCC Program Updates

ICAS Academic Engagement

Arctic Circle Rome Forum – Polar Dialogue:
"Observer States in Arctic Governance"
Rome, Italy
March 3-4, 2026

On March 3, the first day of the Arctic Circle Rome Forum – Polar Dialogue, ICAS co-hosted a session with Osservatorio Artico titled "Observer States in Arctic Governance." The panel featured ICAS Executive Director Nong Hong, Sakiko Hataya (Ocean Policy Research Institute, Sasakawa Peace Foundation), Marco Volpe (University of Lapland), and Jihoon Jeong (Korea Arctic Research Consortium), and was moderated by Ambassador Agostino Pinna, Special Envoy for the Arctic at Italy's Ministry of Foreign Affairs and International Cooperation.

The session explored how selected Arctic Council Observer States have adjusted their Arctic strategies since receiving observer status in 2013, amid shifting geopolitics and accelerating environmental challenges. Drawing on case studies of China, Japan, South Korea, and Italy, speakers compared national approaches and discussed implications for science diplomacy, international law, and multilateral cooperation. The discussion also highlighted both areas of convergence and divergence—from climate and energy cooperation to shipping, maritime governance, and sustainable development—and considered practical ways to strengthen constructive engagement between Arctic and non-Arctic partners in the years ahead.

Learn More: https://chinaus-icas.org/event/observer-states-in-arctic-governance/

TnT & BCCC Commentary

Canada eases EV tariffs on China with quota system, opening new market access
By Yilun Zhang
January 28, 2026

Canadian Prime Minister Mark Carney's recent visit to China has resulted in a rare and tangible adjustment in China–Canada economic relations, including Ottawa's decision to reduce tariffs on Chinese electric vehicles from 100 percent to 6.1 percent and to allow a limited number of Chinese EVs into the Canadian market each year.

In a North American environment where Chinese EVs remain

effectively excluded from the United States and face mounting political scrutiny elsewhere, the announcement naturally drew attention....

Continue Reading:
https://chinaus-icas.org/research/canada-eases-ev-tariffs-on-china-with-quota-system-opening-new-market-access/

BCCC Issue Brief

When Climate Standards Become Trade Rules: CBAM's Rulemaking Power and Global Implications

By Zhangchen Wang
January 27, 2026

The European Union's Carbon Border Adjustment Mechanism (CBAM) is a climate-related trade measure designed to address carbon leakage. At a basic level, it obliges importers of certain carbon-intensive goods to quantify and report embedded emissions—and, as the system matures, to purchase CBAM certificates linked to EU carbon prices. Yet CBAM's most consequential feature lies elsewhere: it is not merely a policy tool for climate change, but a rulemaking mechanism that turns carbon emission accounting into an enforceable component of international trade. By defining how embedded emissions must be measured and translated into monetary obligations at the border, CBAM is redefining what qualifies as legitimate carbon data and credible trade compliance.

This rulemaking power makes CBAM potentially disruptive. For exporters and major economies, CBAM creates a strategic dilemma. Aligning with EU-defined carbon accounting rules may impose significant compliance costs and gradually lock countries into being rule-takers, ceding interpretive authority and long-term influence over how carbon standards are defined to the EU. Resisting CBAM, by contrast, may preserve autonomy in the short run, but it increases the likelihood of regulatory conflict, retaliatory measures, and escalating trade disputes. In the worst case, CBAM could end up weakening both climate cooperation and trade stability, undermining the very environmental rationale that justifies the mechanism in the first place....

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https://chinaus-icas.org/research/when-climate-standards-become-trade-rules-cbams-rulemaking-power-and-global-implications/

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We aim to provide a window into the worldviews of both the United States and China, and thereby serve as a vehicle to promote greater understanding between these two countries and societies.

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