Sustainable Energy in America 2026 Factbook

Tracking Market & Policy Trends

BloombergNEF

The Business Council for Sustainable Energy®

Executive summary (1 of 6)

Bolstered by rising demand, buffeted by policy changes, sustainable energy held its ground in 2025

It was a momentous 2025 for US sustainable energy as electricity demand began to surge, power prices rose, affordability concerns grew and the policy environment deteriorated for many technologies. On the one hand, an unprecedented data center buildout expanded opportunities for virtually all power technologies. On the other, moves by the administration and Congress to pause or eliminate key federal supports for a number of technologies were highly disruptive. In the end, despite these challenges, sustainable energy technologies not only held their ground in 2025 but notched key, new achievements.

As load growth materialized, system challenges emerged

Electricity demand rises

Retail demand for electricity climbed 2% year-on-year in 2025 and is up 8% over the past decade. Recent growth follows more than a decade of near-flat electricity demand in the 2010s. The change has created urgency for action by policymakers and has prompted many new policy announcements.

Energy productivity increases

While total primary energy consumption ticked up 1.2% in 2025, GDP growth outpaced it at 2%, implying an increase in overall energy productivity. This supports the view that economic growth is no longer tightly coupled with energy use. Over the past decade, the US economy has expanded by 27%, while energy consumption rose by just 1.8%.

Data centers for AI become central to power planning

Power demand from data centers grew 18% year-on-year and has risen more than 150% in the past five years. As demand for AI services surges, data centers are poised to be the dominant force behind rising power demand. Unsurprisingly, they came under greater scrutiny in 2025 for their possible associated impacts on grid reliability and electricity costs. While 23GW of IT capacity, or computing load, is now online in the US, an additional 48GW is under construction or committed with land, power and permits confirmed. This new load is expected primarily in PJM, Texas and the Southeast.

Regional grid operators, states and the federal government are grappling with the strains on the system, placing more emphasis on allocating costs and removing barriers to fast-track new sources of power generation to accommodate these power-hungry assets.

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Electricity prices see renewed political focus

Amid data center load growth and a broader political focus on affordability, electricity costs are increasingly top of mind for policymakers.

Wholesale power prices increased sharply in the Northeast and Mid-Atlantic, reflecting higher gas prices, pressure on capacity markets and grid constraints. Prices rose 62% in New York State, 60% in New England, and 45% in PJM, the power market stretching from the Midwest through the Mid-Atlantic and encompassing 13 states and the District of Columbia. High levels of solar and storage penetration smoothed peak-period prices in California, where wholesale prices declined 5%.

Despite growing attention, retail price increases were more gradual on average at 2.3% year-on-year. In PJM, prices rose 6%, but some states within that market saw larger swings. In New Jersey, for instance, prices rose 12%, reflecting local congestion and high exposure to regional natural gas prices, driven in part by a lack of gas infrastructure..

Ratepayers are increasingly feeling the pinch. Over the past decade, US residential electricity prices rose 32%. Compared to other markets, only Japan and Germany report higher power costs for household use. In 2025 gubernatorial elections in Virginia and New Jersey, candidates placed spiking energy costs at the top of their agendas, proposing plans to make data centers pay for new generation and grid upgrades. As a share of personal consumption, however, electricity remained below 1.5% of consumer spend.

Demand, higher costs drove higher grid investment

With the push to add new generation came greater focus on the US power grid and higher investment. Specifically, capital deployed to support expansion and reinforcement of the grid rose to a record $115 billion in 2025, up from $105 billion the year prior. This higher investment also reflected higher costs. In particular, shortages of key equipment such as transformers helped inflate the total investment figure.

Faster deployment timelines are critical to meeting rising demand while limiting ratepayer costs

Speed to bring new generating capacity online is paramount as many regional grids lack abundant spare capacity. Distributed solar, storage and on-site natural gas generation have typically been among the fastest to deploy. Since 2018, solar has consistently posted some of the shortest lead times for utility-scale projects, averaging 14–24 months across most US regions.

Companies, investors and consumers invested more in sustainable energy sectors

Investment in sustainable energy sectors rose in 2025. Energy transition investment as defined by BloombergNEF, which includes electrified transport, de-carbonization of industrial processes, and grids, grew 3.5% year-on-year to a record $378 billion. Growth was driven by grids investment, which rose 10%, largely due to rising electricity demand and integration of higher renewables. More funds flowed to EVs and EV charging year-on-year. Investment into clean energy (inclusive of renewables and batteries) remained flat as companies and investors spent the first half of the year awaiting clarity on tax incentives and tariffs. Investment surged in the second half as consumers and businesses rushed to take advantage of federal tax credits before they expired.

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In a busy year for build, solar and storage dominated new utility-scale electricity capacity additions

The US saw the highest annual capacity additions in more than two decades, with 54 gigawatts (GW) of new utility-scale generation and storage capacity commissioned in 2025. As in recent years, clean technologies made up the bulk of new capacity.

Renewables accounted for 61% of new capacity at 33GW. Utility-scale solar specifically led with 27GW of alternating current capacity commissioned, while wind held steady at about 6GW. Including battery storage, zero-emission sources reached a new peak of 48GW, or 90% of total additions. Utility-scale storage stood out with a record 15GW added, reflecting declining battery costs and storage's ability to provide greater system flexibility and support higher renewable penetration on the grid.

From a record-low in new builds in 2024 to 5GW in 2025, natural gas capacity additions doubled year-on-year. Demand remains high, but additions were lower than average levels over the past decade due to turbine supply constraints and project economics.

US power generation hit a 20-year high with natural gas and zero-carbon sources accounting for the largest shares of output

Like capacity build, US power generation hit a 20-year high in 2025, growing 3% year-on-year to reach 4,514 terawatt hours (TWh). Natural gas was the largest single contributor at 40% of total generation. Taken together, zero-carbon sources – renewables and nuclear power – provided 43% of generation. Rising top-line electricity demand appeared to bolster all power-generating technologies; coal's share of generation rebounded year-on-year to account for 16% of generation.

Natural gas supply, demand, and exports grow

Natural gas demand grew 5.1% in 2025 to 104.8 Bcf/d, driven by growing residential and commercial building use and exports. Natural gas remains the dominant heat source for most industries in the US due to prolific, low-cost domestic production.

Utility expenditure on natural gas infrastructure was $39.7 billion in 2024, the last year of complete data. This is down significantly from 2023, but was the second highest year of expenditures over the past decade. As energy resilience is an increasing concern, underground storage can meet up to 50% of daily natural gas demand.

A historic high for corporate clean energy procurement

Corporate power purchase agreements for zero-carbon electricity reached 29.5GW in 2025, the highest annual total on record, narrowly surpassing the 29.1GW signed in 2024. Last year was marked by a growing share of nuclear, hydropower, geothermal and carbon capture and storage contracts as tech giants doubled down on clean, baseload power for AI data centers. Among the corporate buyers, Meta led the way, with over 10GW of deals signed, followed by Amazon at 6.8GW.

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Electrified transport had another record year as incentives phased out

EV sales reached a record 1.6 million vehicles in 2025, 3.7% higher than 2024, reflecting consumer uptake ahead of the phaseout of federal tax credits in October. Cars with plugs – both pure EVs and plug-in hybrid electrics (PHEVs) – accounted for about one in 10 total new passenger vehicles sold. The rate of growth, however, has continued to slow. From 2021 to 2022 and 2022 to 2023, year-on-year growth was approximately 50%. The removal of fuel economy constraints and uncertainty around California's waiver, together with the elimination of purchase tax credits, further threaten EV adoption.

Renewable fuels saw progress, especially renewable natural gas and sustainable aviation fuel

Renewable natural gas (RNG) supply reached 225 trillion British thermal units (BTU) in 2025, up 24% from 2024, supported by utilities signing several long-term offtake agreements and a 21% year-on-year increase in demand from natural gas vehicles. Most supply continued to come from landfill gas, followed by agricultural and manure-based sources.

Sustainable aviation fuel (SAF) had its strongest year to date, with capacity more than doubling in 2025. Growth was driven by export opportunities generated by EU and UK SAF mandates, US tax credit extensions for clean fuels and rising domestic demand for jet fuel. By contrast, renewable diesel supply declined for the first time since the market began to emerge in 2020, reflecting squeezed producer margins.

A year of dramatic policy change for the energy sector

Rapid changes in tariff policy challenged investment decisions

The first half of 2025 marked considerable uncertainty for companies and investors with exposure to clean-tech supply chains. A remarkable 47 trade and tariff policies were announced through June. This included 34 higher trade barriers and 13 reductions. The second half of the year was slightly slower with 40 total tariff changes announced.

Among technologies core to the transition, lithium-ion batteries were most exposed to drastic swings in tariffs. Non-EV battery duties rose from just 11% at the start of the year to over 156% in April, before finishing the year back down at 31%. This impacted deployment of Chinese-made batteries in the US. In 2024, China accounted for 69% of battery imports to the US. In 2025, that fell to 40% as companies adapted to the high tariffs.

OBBBA makes significant changes to energy tax policy, phasing out or altering a number of credits

The One Big Beautiful Bill Act (OBBBA), passed in July 2025, accelerated the phaseout of key long-standing tax credits for clean energy and cut federal subsidies for clean-tech manufacturing.

The 48E investment tax credit and 45Y production tax credits, the transformed Production Tax Credit and Investment Tax Credit enacted under the Biden-era Inflation Reduction Act (IRA), are now on rapid phasedown timelines for wind and solar.

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Projects deploying those technologies can claim the credits through 2027 but must meet increasingly stringent Foreign Entity of Concern (FEOC) rules around supply chains. Energy storage retains the tax credit through 2034 but is subject to its own FEOC rules.

Incentives for EVs were eliminated almost immediately. The 30D vehicle purchase credit sunset October 1, and the 30C charging credit will phase out at the end of June 2026. Energy efficiency credits for residential (25C, 45L) and commercial (179D) customers were also eliminated.

Manufacturing subsidies were cut by $32 billion from unspent allocations, and previously obligated federal spending is also at risk of canceled loans and grants. Since the passage of the IRA in 2022, manufacturers had planned to invest over $106 billion in clean-tech supply chains. But new announcements slowed significantly in 2025 and almost 10% of original pledges have now been canceled, per BNEF data.

Offshore wind was dealt severe blows

Offshore wind projects faced particular challenges in 2025. First, the Trump administration sought an indefinite moratorium on any new leasing and permitting of projects. This was reversed by court order in December, but the administration is not required to make progress on permit applications.

The administration also issued stop-work orders throughout the year to five offshore wind projects already under construction along the eastern seaboard. Courts have since granted developers preliminary injunctions, allowing them to continue construction. In the interim between the issuance of the orders and the court injunctions, the industry lost millions per day as construction was paused.

Further permitting setbacks for solar and wind

Under a July Department of the Interior memorandum, renewable projects now face an additional permitting hurdle beyond the environmental reviews that have long delayed construction. Any solar or wind project subject to federal permitting or consultation must now pass through a centralized review process previously handled by regional bureaus, adding another layer of oversight. These changes have fueled calls for permitting reform to provide technology-neutral certainty.

Greater support for critical minerals, nuclear and 24/7/365 capacity

The Trump administration has supported several specific energy sectors – critical minerals mining and processing, nuclear power development, natural gas expansion, grid technologies, hydropower and geothermal energy, among others

The Departments of Energy and Commerce secured equity stakes in critical minerals company Lithium Americas, among others, and nuclear reactor firm Westinghouse. The administration also reached agreements with Japan and South Korea around critical minerals, nuclear, natural gas and shipbuilding. The administration directed federal agencies to accelerate nuclear development, setting a goal to construct 10 new large reactors by 2030 and quadruple capacity by 2050 and provide federal loans to restart the large-scale plant in Pennsylvania formerly known as Three Mile Island.

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In addition, nuclear, as well as other forms of dispatchable zero-emission power like geothermal, hydropower, hydrogen and carbon capture-fitted turbines retain extended tax credit eligibility and less restrictive Foreign Entity of Concern (FEOC) standards than energy storage under the OBBBA. New bonus depreciation tax deductions for manufacturing across sectors will also benefit all energy companies, partly compensating for the loss of manufacturing tax credits.

Renewed backing for fossil fuels

In addition to the policy changes mentioned, the administration has increased support for fossil fuels. Declaring a national energy emergency, President Trump issued executive orders to expedite oil and natural gas permitting. The OBBBA cut costs for fossil-fuel operations on federal lands, restoring noncompetitive leasing and reducing royalties. Driven by the promise to revive coal, the administration mandated the continued operation of at least six uneconomic, retiring coal generators and announced $625 million to recommission coal plants, retrofits, and rural coal energy projects.

US greenhouse gas emissions rise, as physical risks continue to translate to damages

Emissions grew, including from the power sector, as coal generation ticked up

The US withdrew from the Paris Agreement in January 2025. Prior to pulling out, the US targeted cutting emissions by 50-52% from 2005 levels by 2030. As of 2025, the US has cut just 14%. For the US to remain on track for targets that had been in place through 2024, power emissions would need to fall by a hefty 13% per year.

The US emitted an estimated 6.4 billion metric tons of carbon dioxide equivalent ($MtCO_2e$) last year, up 1.7% from 2024. Power-sector-driven greenhouse gas emissions rose 3.6% year-on-year, while emissions in the broader economy also rose by 1.1%. This reverses the trend seen prior to 2024 of a steady decline in power-sector emissions since 2007. Power sector emissions at the end of 2025 were 39% below 2005 levels. Over the last 20 years, shifts in the power generation mix away from coal and toward natural gas and renewables have enabled these power emissions reductions. However, in 2025, coal generation rebounded amid rising electricity demand. Transport remains the highest contributor to US emissions but declined by 0.6% as the sector slowly begins to electrify.

The financial costs of climate change reach $800 billion in 2025

The costs of climate disasters and physical risk are not a distant threat. In 2025, the US saw over $800 billion of climate-related financial impact from power outages, government recovery spending, subsidies for insurance and firefighting. That represents about 2.6% of GDP and an average annual growth in damage costs of 11% since 2015.

Quick facts (1 of 2)

Investment and deployment

- **Overall US energy transition investment moved up 3.5% year-on-year to $378 billion**, as higher funding for grids and electrified transport more than offset a dip in renewables investment. Grids spend grew 10%, largely due to rising electricity demand and the integration of more renewable power on the system.
- **Electric generation capacity additions hit a two-decade high** with 54 gigawatts (GW) of new utility-scale generation and storage capacity commissioned in 2025.
- **Renewables accounted for 61% of all new build at 33GW**. Utility-scale solar led with 27GW (AC) capacity commissioned, while wind held steady at about 6GW. Including battery storage, zero-emission sources reached a new peak of 48GW, or 90% of total 2025 additions as measured in capacity terms.
- **Power generation grew 3% year-on-year to hit a 20-year high of 4,514 terawatt hours (TWh)**. Natural gas was the largest single contributor at 40% of generation. Taken together, zero-carbon sources – renewables and nuclear power – provided 43% of generation.
- **Natural gas demand grew 5.1%** in 2025 to 104.8 Bcf/d, driven by growing residential and commercial building use and exports.
- **EV sales reached a record 1.6 million units, up 3.7% from 2024**, partly reflecting the consumer rush to take advantage of federal tax credits before they phased out in October.
- **Renewable fuels saw progress,** renewable natural gas (RNG) supply reached 225 trillion British thermal units (BTU) in 2025, up 24% from 2024 and sustainable aviation fuel (SAF) had its strongest year to date, with capacity more than doubling in 2025.
- **Corporate clean power purchase agreements reached a new high** of 29.5GW in 2025, the highest annual total on record, narrowly surpassing the 29.1GW signed in 2024. Last year was marked by a growing share of nuclear, hydropower and geothermal contracts.

Load growth and prices

- **National retail electricity demand climbed 2% year-on-year in 2025** and is up 8% over the past decade.
- **Power demand specifically from data centers grew 18% year-on-year** and has risen more than 150% in the past five years.
- **23GW of IT capacity is now online in the US** and an additional 48GW is under construction or committed with land, power and permits confirmed, primarily in PJM, Texas and the Southeast.
- **Retail electricity prices rose an average of 2.3% nationally year-on-year.** In PJM, prices rose 6%, but some states within the 13-state (plus Washington, DC) market saw larger swings. In New Jersey, for instance, prices rose 12% and were a hot-button issue in the fall elections.

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Policy turmoil

- **Signed into law July 4, 2025, the One Big Beautiful Bill Act (OBBBA) cut or significantly altered tax credits that have supported US sustainable energy technologies for decades.** The EV consumer tax credit disappeared in October. Credits supporting energy efficiency improvements were gone by the end of the year. Wind and solar credits will phase out in the next few years. Other technologies' credits sunset on longer timelines.
- **The administration made no less than 87 trade and tariff policy changes on energy transition related goods** in 2025, creating considerable uncertainty for companies and investors.
- **Duties on batteries for use in stationary storage applications** rose from 11% at the start of the year to over 156% in April, before finishing the year back at 31%.
- **The share of battery imports from China fell from 69% in 2024 to 40% in 2025** (in dollar terms) as companies adapted to higher tariffs.
- **All five under-construction offshore wind projects in the Atlantic received stop-work orders from the administration** before courts intervened to restart them. In the interim, developers lost millions and still await final decisions.
- **Almost 10% of the $106 billion announced investment in clean-tech supply chains since the passage of the IRA has been cancelled** following the rollback of incentives under the OBBBA.

Climate Change

- **Greenhouse gas emissions from the power sector rose 3.6% year-on-year as coal generation picked up**. Power emissions would need to fall by a hefty 13% per year for the US to remain on track for the targets set out in the Paris Agreement.
- **The US saw over $800 billion of climate-related financial impact** from power outages, government recovery spending, subsidies for insurance and firefighting. That represents about 2.6% of GDP and an average annual growth in damage costs of 11% since 2015.

These trends are discussed in far greater depth, and with graphic illustrations, in the Factbook itself.

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