

Transition Amid System-Wide Growth

A BNEF Briefing Note for Climate Week 2026

September 18, 2026

High-level insights to prepare for the week

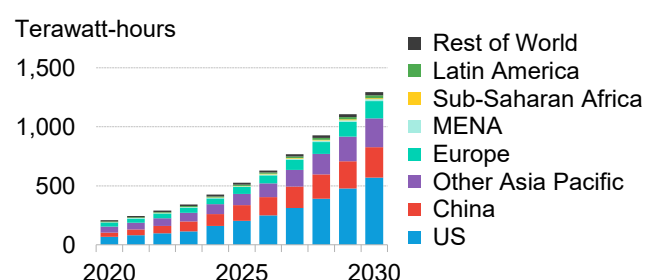
As investors, policymakers, and other stakeholders descend on New York for Climate Week 2026, how energy is being produced, delivered and consumed is all changing rapidly. Two major events – the AI data center build-out and the Iran war – are accelerating key energy shifts in most corners of the world. Here, we highlight how these forces could advance decarbonization, and where they add new dimensions to an already daunting challenge. With energy demand surging and changing, the competing goals of sustainability, affordability, and security are in tension more than ever.

This briefing highlights recent BNEF research touching on key topics all but certain to arise during the course of New York Climate Week agenda. To learn more about BloombergNEF's expertise and services, please visit about.bnef.com.

Power demand expected to surge, driven by data centers

The boom in AI digital infrastructure is expected to strain power systems and spur capacity build globally. BNEF expects global electricity demand to more than double by the end of this decade to over 1,200 terrawatt-hours (TWh). This trend is hitting the US particularly hard, with the region representing nearly half of anticipated global data-center demand growth.

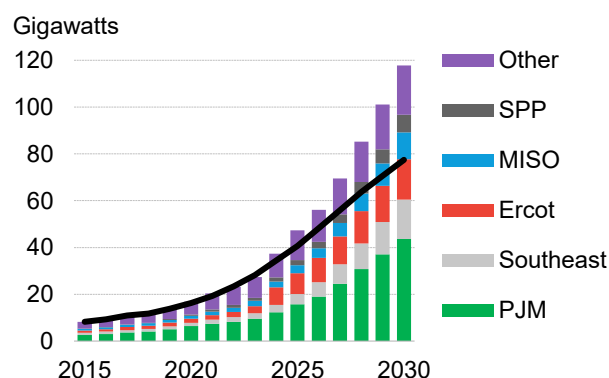
Figure 1: Global data-center power demand outlook



Source: BloombergNEF, DC Byte. Note: MENA is Middle East and North Africa.

BNEF now expects total US data-center power demand to reach 118GW by 2030, up more than 50% from 77GW in our previous outlook ([full report](#) for BNEF clients). The increase reflects a proliferating pipeline of credible and increasingly large projects.

Figure 2: US data-center power demand outlook

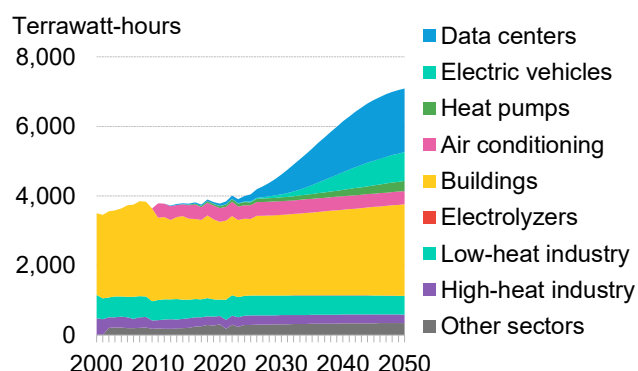


Source: BloombergNEF, DC Byte. Note: SPP is Southwest Power Pool, MISO is Midcontinent Independent System Operator, Ercot is Electric Reliability Council of Texas, PJM is PJM Interconnection.

However, major roadblocks – speed to power, lack of grid access, limited equipment supply – and popular pushback threaten to potentially reign in growth. Meanwhile, concerns over the pressure data centers could put on the grid, including on power prices, are rapidly rising. Others are voicing deep concern about the societal and economic implications of the technology itself. The backlash is only growing as the US mid-term elections in November loom. Data center developers seeking to bypass grid queues and allay public concerns are seeking to install on-site power generation.

Data centers have now overtaken transport electrification as the single largest expected long-term driver of electricity demand growth in BNEF's latest US projection. Overall demand is set to rise 75% by 2050.

Figure 3: US electricity demand growth by source



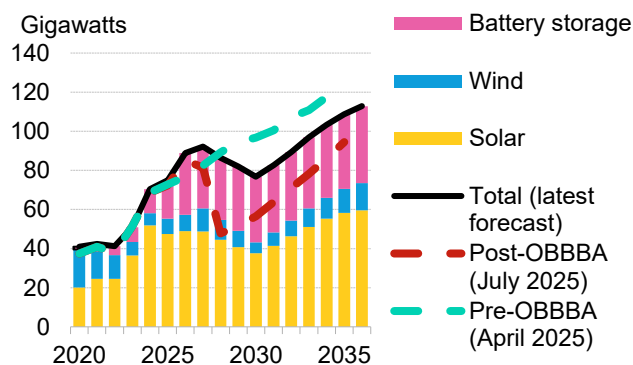
Source: BloombergNEF

Rising demand has buoyed US clean energy despite major policy challenges

US renewables developers have suffered key policy reversals over the past two years, but the tech industry's hunger for cheap electrons has improved the outlook for clean power. BNEF's latest forecast for cumulative renewable build through 2035 is 26% higher than our outlook in the immediate aftermath of the One Big Beautiful Bill Act's passage in July 2025, which phased out many key incentives for renewables. Our latest outlook is now just 9% below our pre-OBDBA expectations under an extended tax-credit

regime. We anticipate this year to set yet another record, with 89GW of renewables and storage added.

Figure 4: Annual US clean power capacity additions



Source: BloombergNEF, Energy Information Administration.

In addition to rising electricity demand, our near-term forecast is bolstered by solar and wind developers' successful "safe harboring" to secure tax credits by getting projects under construction before July 4. BNEF estimates 110-156GW of utility-scale solar capacity has been safe-harbored and is almost certain to reach completion by 2030 ([full report](#)).

Much of the recent and projected growth in clean power build is driven by battery storage, with installations expected to rise 60% year on year to more than 30GW in 2026. Batteries are increasingly being deployed alongside solar, creating a zero-carbon rival to firm thermal power while capturing lucrative tax credits that remain available for storage through 2033. Solar-plus-storage additions rose 43% last year, while the 124GW in the pipeline would triple existing capacity. Co-located projects can protect project value by maximizing the share of costs tied to the battery, making up to 60% of the combined project capex eligible for subsidies ([full report](#)).

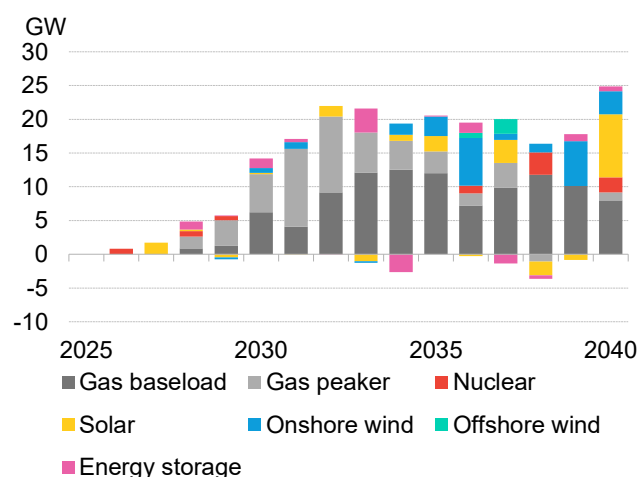
It is not only renewables and storage that have benefitted by the sudden surge in US electricity demand. Existing nuclear reactors that might otherwise have been retired are seeing their licenses extended while plants that had previously been shuttered are returning to service. One unit at the former Three Mile

Island project in Pennsylvania is due back online in 2027, thanks in part to a \$1 billion federal loan. Rechristened the Crane Clean Energy Center, the project will power a Microsoft data center.

...But gas is getting the biggest boost

However, absent fuel and equipment price adjustments, US gas remains the cheapest way to meet continuous, around-the-clock load in regions where data center growth is strongest. As a result, developers are turning to gas to fuel new dedicated plants to provide compute power. Some seek to put such generation on site to sidestep interconnection and other issues. But regardless of whether it is in front of or behind the meter, gas-fired power is poised to meet the vast majority of incremental data-center power demand. In all, data-center demand adds a whopping 160GW of incremental gas-fired power capacity by 2040, representing over 70% of all such marginal additions, according to BNEF's latest forecast. This will further strain the supply chain for gas turbines, which have seen surging costs over the past two years.

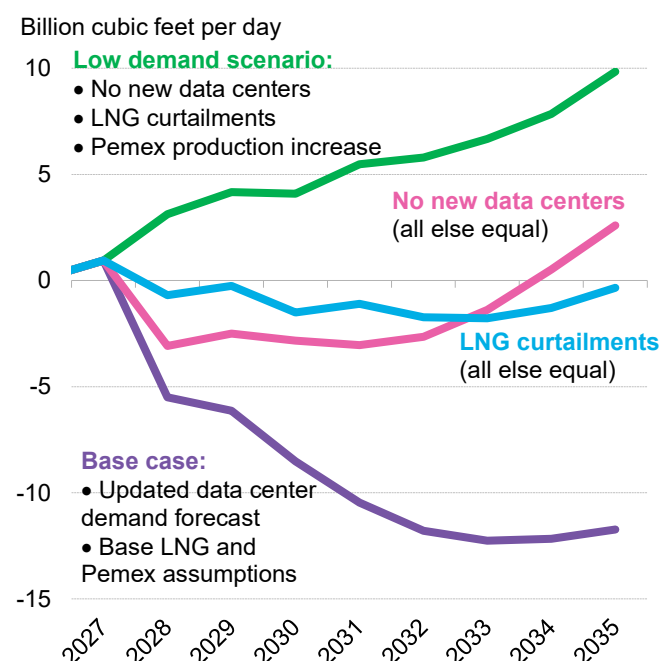
Figure 5: Annual capacity additions to meet incremental data-center demand



Source: BloombergNEF. Note: This analysis measures the marginal impact of data-center power demand in our least-cost power system modeling.

This has critical implications for the US, and potentially global, gas markets. Under our current near-term outlook for domestic gas supply and demand, boosted by both data centers and planned expansion of LNG exports, the US market faces a potential 12 Bcf/d (billion cubic feet per day) domestic deficit by 2035 ([full report for BNEF clients](#)).

Figure 6: US gas balance under different demand scenarios



Source: BloombergNEF

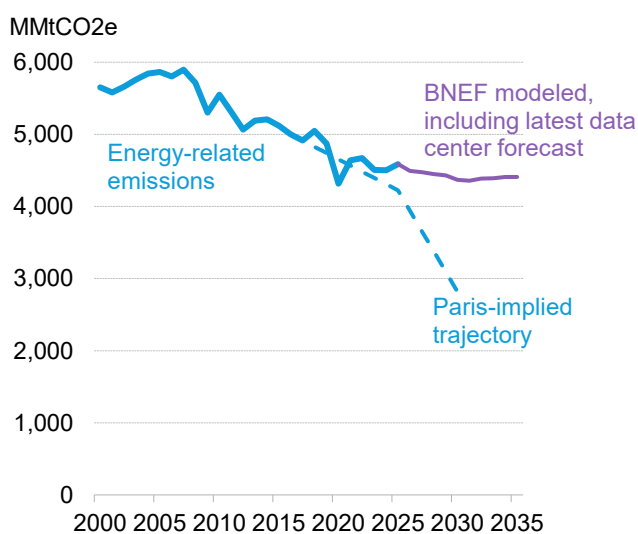
The rapid rate of demand growth poses a complex challenge for domestic gas producers, which BNEF projects to boost output by over 35 Bcf/d by 2035. Ultimately, something may soon have to give: data-center or LNG terminal buildout could slow, or drilling and pipeline expansion could accelerate. Barring some change, gas prices could rise, challenging the long-standing paradigm of cheap, abundant gas in the US. This risks putting two of the Trump administration's central priorities – AI leadership and global energy dominance – at odds with another: keeping energy affordable.

A major net-negative for US climate progress

The data center buildout and its associated power demand threaten to derail US climate progress. By expanding reliance on gas-fired power and perhaps even extending the life of some coal-fired plants, the AI buildout could hobble efforts to decarbonize the country's energy sector.

Were the US to rejoin the Paris Agreement and meet its earlier 2016 pledges, economy-wide emissions would need to fall 52% from 2005 levels by 2030, equivalent to 33% below 2025 levels. However, the trajectory implied by BNEF's most recent least-cost modeling suggests energy-related emissions effectively flatline, with a modest 5% drop from 2025 levels by 2030.

Figure 7: US emissions and implied trajectories



Source: BloombergNEF, Environmental Protection Agency.

Note: BNEF emissions factor our latest data center energy demand forecast into our Economic Transition Scenario, which models a transition based on market forces. Chart only includes energy-related emissions. MMtCO2e is million metric tonnes of carbon dioxide equivalent.

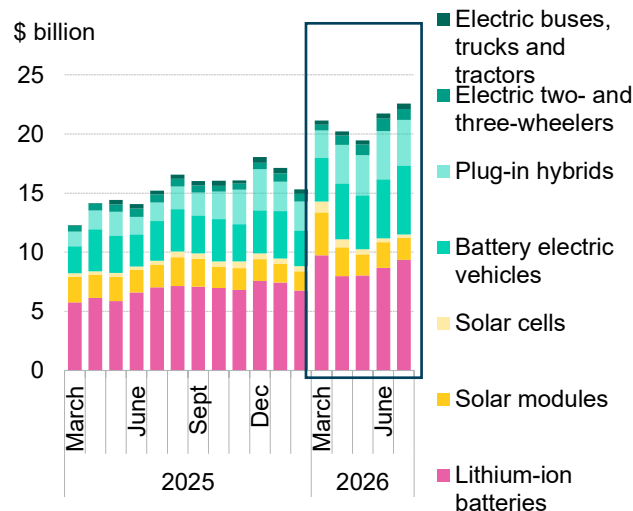
Iran war fast forwards some energy transition trends

On February 28, the US and Israel launched missile strikes on Iran. Within days, Iran responded militarily, then economically by dramatically clogging the flow of

oil, gas and other goods through the Strait of Hormuz. Given the interconnectedness of the global economy, the war's impacts have been felt in most corners of the world. But implications have varied widely.

Policy responses have ranged from short-term efforts to shield consumers from higher fuel prices to new energy conservation standards and even new auctions for clean power capacity. Generally speaking, in countries where consumers are fully exposed to high fossil prices and where they have unfettered (non-tariffed) access to the lowest-cost clean energy goods, they are buying them – at unprecedented rates. Chinese battery/solar/EV exports averaged \$15.4 billion per month for the 12 months leading up to the start of the war. They have averaged \$21 billion per month since and hit an all-time monthly high of \$23 billion in July, the last month for which there is complete data.

Figure 8: Exports of clean energy goods from China, before and after the Iran war

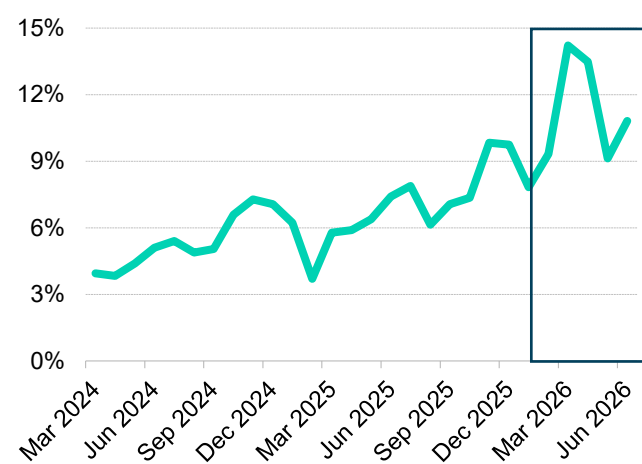


Source: Sinoimex, BloombergNEF.

Perhaps more impressive than the dollar volumes has been that this equipment is now arriving in far more countries than ever before. Pre-conflict, major African economies including Morocco, Egypt, Nigeria, Ghana and South Africa were all net importers of refined oil products. Most African homes and businesses rely on

petrol or diesel generators, since local grids are often unreliable. As the Iran war boosted global fuel prices, generator running costs rose, exacerbating unstable power supply situations in many countries. Imports of Chinese-made solar equipment into African nations spiked to 14% in the month immediately after the war began.

Figure 9: Share of Chinese-made solar module exports delivered to African nations



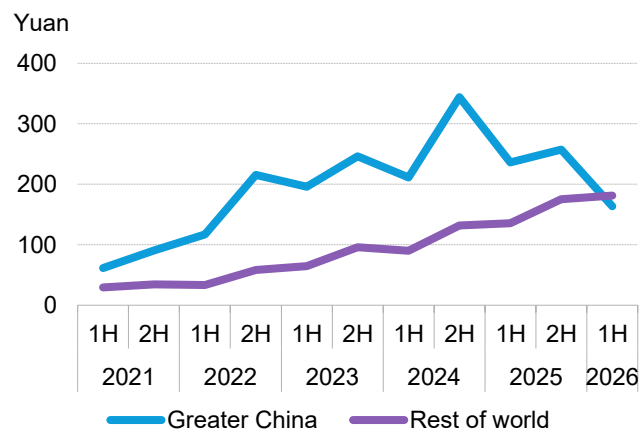
Source: BloombergNEF, Chinese customs data.

...and boosted demand for Chinese clean energy goods

The surge in demand could not have come at a more fortuitous time for Chinese manufacturers. At the start of 2025, the world faced a potential glut of clean energy equipment due to massive overbuild of factories in China producing batteries, solar equipment and EVs. Such over-capacity was hardly a new story as Chinese supply has run ahead of demand for some time now, but the situation was poised to become particularly acute as demand in China itself was slackening for some of these products.

The war appears now to have bailed at least some manufacturers out. Most notably, the world's largest EV manufacturer, BYD, recently announced that for the first time in its history, its non-China vehicle sales outpaced those from inside mainland China, Taiwan and Hong Kong.

Figure 10: BYD sales by market



Source: Bloomberg. Note: Greater China includes Taiwan and Hong Kong.

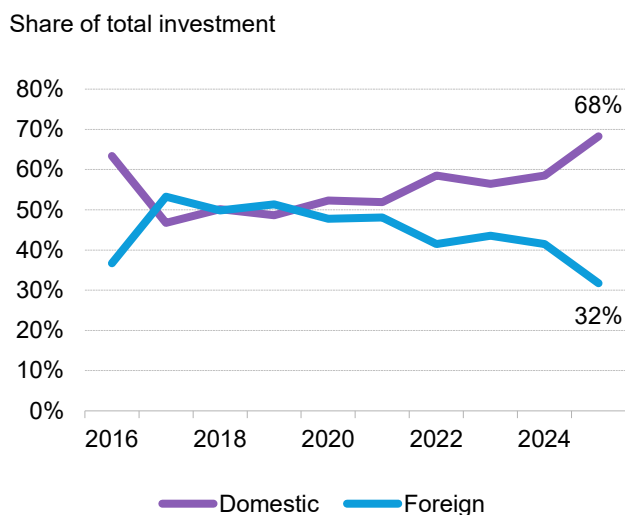
Emerging markets renewables financing goes local

While global wind/solar investment peaked in 2024, capital deployed in low- and middle-income economies hit a record \$140 billion in 2025 with more nations than ever receiving funds from abroad. But this is not primarily a "north-south" story of wealthier nations upping their generosity. Rather, in many cases it is middle-income economies themselves that are their own major sources of capital.

On a dollar basis, investment in low- and middle-income markets (excluding mainland China) remains concentrated. India, Brazil and Turkey received 52% of disclosed renewable utility-scale investment over 2016-25, with India alone accounting for 29%. Middle-income economies are major providers of capital. Six of the 10 largest providers are middle-income, together supplying about 48% of total disclosed asset finance.

Along similar lines, financing provided domestically has gained importance though models vary sharply across markets. A total of 68% of all funding for projects in low- and middle-income markets came from sources operating within those economies.

Figure 11: Renewables investment in low- and middle-income economies, by investor nationality



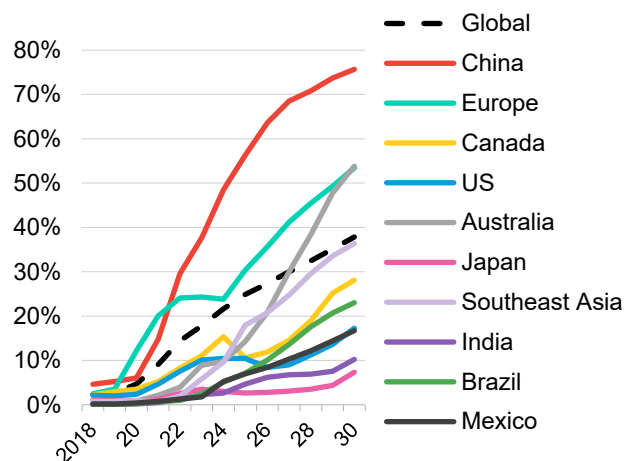
Source: BloombergNEF. Note: Investors are classified at a deal level. Investor nationality is based on the location of the renewable energy asset versus the headquarters of the investor providing debt or equity financing to the asset.

The EV demand outlook is bright everywhere but the US

The electrification of transport continues to advance, but progress is uneven across regions. A record 23 million EVs will be sold in 2026, BNEF projects. Just over one in four vehicles sold worldwide will come with a plug this year.

China's lead over the rest of the world, particularly the US, is staggering. Over 60% of new cars sold in China in July 2026 were electric, and China will continue to account for more than half of the global EV market by the end of the decade. China's cost advantage remains formidable, stemming from its mature battery supply chains and favorable financing conditions.

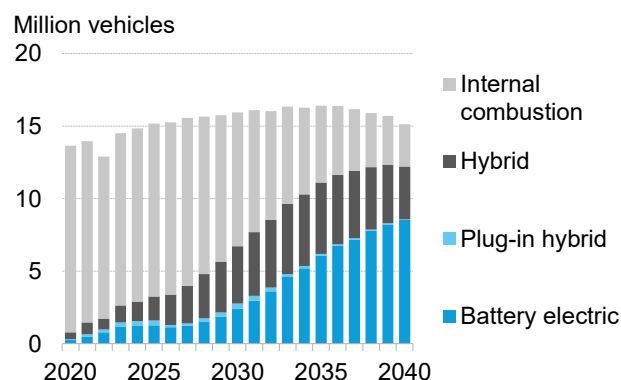
Figure 12: EV share of new passenger-vehicle sales by market



Source: BloombergNEF. Note: Europe includes the EU, the UK and European Free Trade Association (EFTA) countries. Electric vehicles include battery-electric and plug-in hybrid vehicles.

In the US, adoption is far slower – BNEF expects just 8% of vehicles sold this year and 17% in 2030 to be electric. BNEF's near-term outlook for the US has been dampened by numerous policy headwinds, chiefly the repeal of the \$7,500 EV purchase tax credit in September 2025 and the elimination of penalties under efficiency standards. Still, EV sales begin to accelerate next decade as domestic battery manufacturing ramps for the power sector, bringing long-term cost crossover benefits for vehicles down the line.

Figure 13: US vehicle sales by drivetrain



Source: BloombergNEF

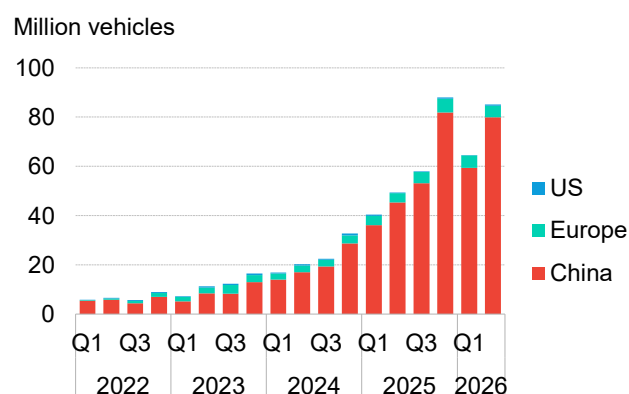
Zero emissions trucks are gaining traction, mainly in China so far

The global market for medium and heavy zero-emission trucks continues to expand rapidly on the back of improving technology, more infrastructure investments, and a renewed focus on energy security. The market expanded 75% in the first half of 2026 versus the same period last year and is becoming a distinct part of the broader truck industry. The sales share of medium- and heavy-duty electric trucks could exceed 9% of total global truck volumes in 2026.

Sales continue to be concentrated in China, with those in several European countries also picking up. Sales in India, Brazil and countries in Southeast Asia are also growing, albeit from a low base. Practically all zero-emission trucks sold between January and June 2026 were battery electric.

The addressable market for battery trucks is large. Electric vehicles benefit from high utilization, and the wide range of driving distances already bring a sizable share of use cases within economic competitiveness today. That can approach 50% of the fleet depending on capital and energy costs. Elevated diesel prices could speed adoption rates, particularly if current conditions last.

Figure 14: Global sales of zero emission trucks



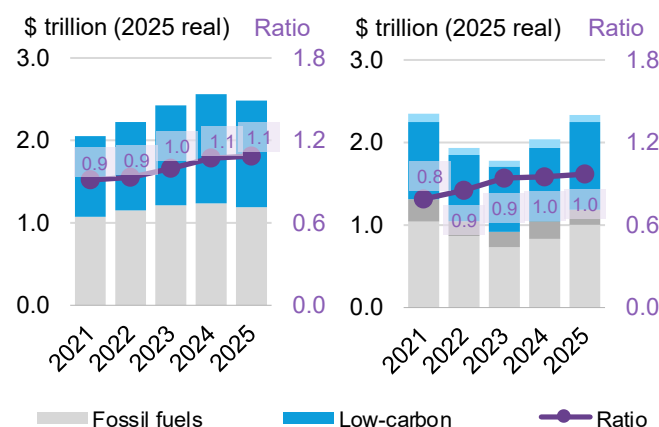
Source: BloombergNEF. Note: Europe is the EU 27, the UK, Norway, Switzerland, Iceland and Liechtenstein. Includes medium- and heavy-duty trucks.

Ratio of funds for low-carbon energy to fossil fuels remains stubbornly steady

One way to take stock of the pace of the energy transition is to “follow the money.” Through the lens of capital flows, the transition appears to be stuck in a dead heat between traditional fossil fuels and low-carbon energy supply. Whether looking at economy-wide spending by companies and governments or bank-facilitated financing for companies and projects, fund flows are shifting toward cleaner energy but far too slowly to address the climate challenge.

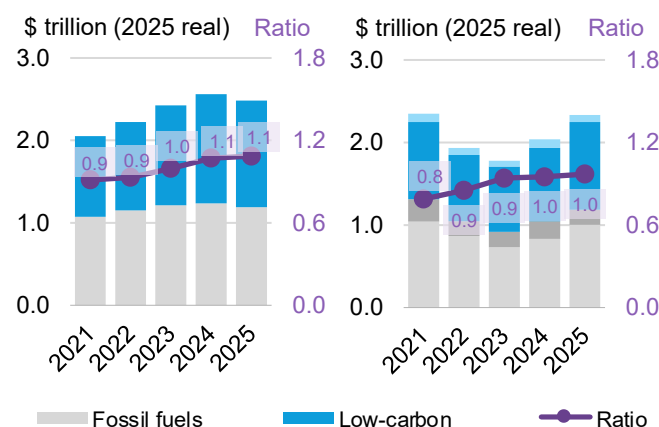
For every \$1 spent by global companies or governments on fossil fuels in 2025, \$1.09 went toward low-carbon energy. The comparable ratio for bank-facilitated financing, referred to as the Energy Supply Banking Ratio, mirrors this but is not precisely aligned – for every \$1 banks facilitated for fossil fuel companies and projects, about \$0.97 went toward low-carbon sources ([public summary report](#) | [full report for BNEF clients](#)).

Figure 15: Capital investment in energy supply



Source: BloombergNEF, Bloomberg LP, International Energy Agency, Urgewald, IJGlobal.

Figure 16: Bank financing for energy supply

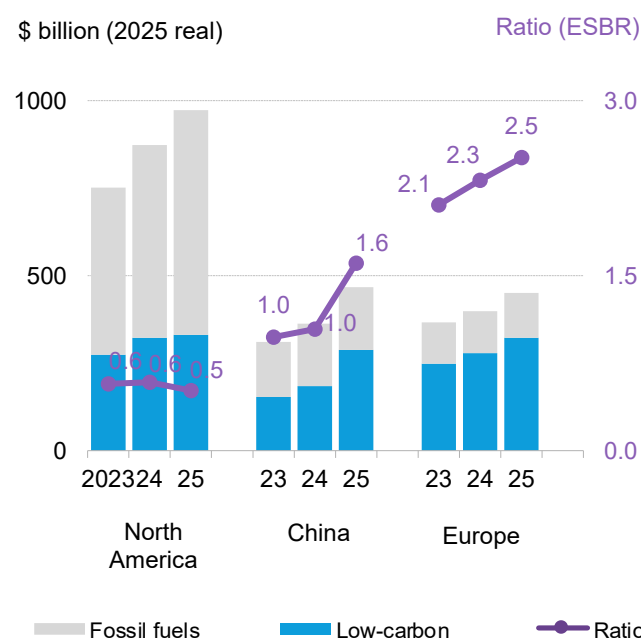


This represents a very marginal increase in both measures. But it falls significantly short of the rate necessary to meet climate goals. To align with limiting warming to 1.5C, BNEF research shows investment

would have needed to average 4:1 annually this decade.

Tracking financing activity by region also makes starkly clear just how divergent the energy transition is playing out across markets. The ratio of low-carbon to fossil-fuel financing remains persistently low in North America at around 0.5 – far below the global average – as the US and Canada continue to serve as oil and gas exporters. Europe's ratio has long been far higher and continues to rise, reaching 2.5 in 2025. This reflects its longstanding favorable conditions for renewables, the region's reliance on fossil-fuel imports rather than domestic production, and last year, financing for several large offshore wind projects. China saw the greatest year-on-year jump in ratio to 1.6 in 2025, after low-carbon and fossil-fuel financing were roughly equal in each of the prior two years. The increase was driven by massive debt issuance for transmission and a decline in fossil-fuel financing.

Figure 17: Energy supply financing by region of risk

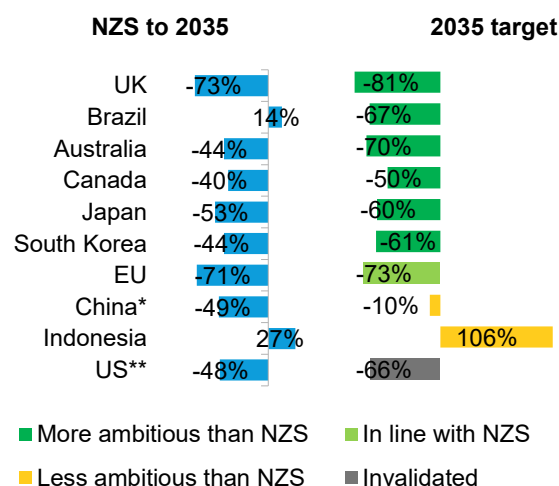


Source: Bloomberg LP, BloombergNEF, Urgewald, IJGlobal. ESBR is the Energy Supply Banking Ratio, which is the ratio of bank-facilitated financing for low-carbon energy supply versus that for fossil fuels.

International climate commitments fall critically short of net-zero needs

Climate ambition is diverging globally. Some countries have set targets in line with or more ambitious than BNEF's Net Zero Scenario (NZS), which represents a credible pathway to limit global warming to 1.8C. These economies include the UK, EU, Brazil, Canada, Australia, South Korea and Japan. But it is the economies with the greatest share of global emissions which lack sufficiently ambitious targets: the US has abandoned its Paris pledges and China's 10% emissions reductions goal is paltry in comparison to the 49% implied by BNEF's NZS.

Figure 18: Emissions targets of select major economies vs BNEF's Net Zero Scenario (NZS)



Source: BloombergNEF, ClimateWatch, United Nations.

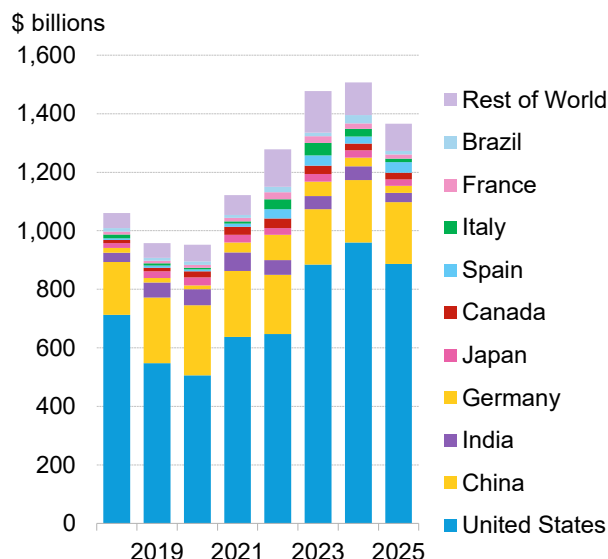
Note: Carbon emissions from energy only. Applies parties' maximum, economy-wide targets. *China's target is based off the year emissions peak. **US plan was invalidated after Trump signed an executive order to exit the Paris Climate Agreement.

While climate action stalls, climate damages are being felt more than ever

While climate change may have slipped down the political agenda in the US, policymakers, companies and investors alike are increasingly confronting its physical consequences. Climate-related damages from

fire, flood and storms have now cost the world's largest economies well over \$1 trillion annually for each of the past five years. The US is especially exposed, accounting for over 60% of the estimated losses from property and disaster recovery.

Figure 19: Annual climate damages



Source: Bloomberg Intelligence Climate Damages Tracker, BloombergNEF. Note: Climate damages include insured and uninsured damages to property and climate-related government spending (including drainage grants, disaster prevention and recovery, environmental protection and agricultural insurance subsidies).

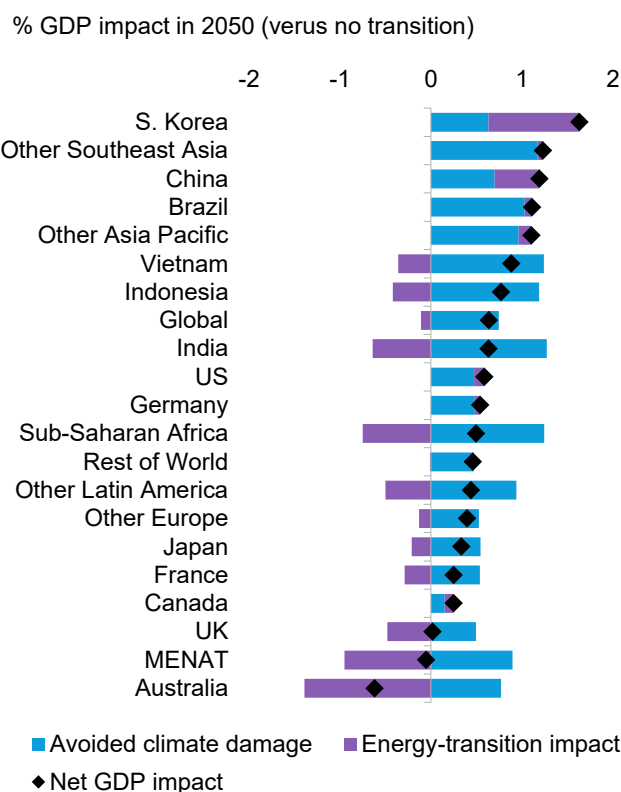
...which raises the economic value of transitioning

Transitioning the energy system is costly, but not doing so is far costlier. New BNEF research shows that under the Economic Transition Scenario, which assumes a least-cost approach to meeting future energy demand, the value of avoided damages resulting from lower emissions exceeds the cost of energy transition investment. This implies a net positive impact on GDP by 2050 worldwide and in nearly every region ([full report for BNEF clients](#)).

Notably, in some countries, the energy transition itself – not just avoided damages – results in net gains for GDP, including both the US and China. This is driven

by the economic opportunity of building out clean electricity and manufacturing, which offsets the lost value of reduction of fossil-fuel extraction and refining on a macroeconomic basis.

Figure 20: Transition costs and avoided climate damage by region, Economic Transition Scenario



Source: Bloomberg Economics, BloombergNEF, Howard and Sterner (2025), Tol (2024). Note: MENAT is Middle East, North Africa and Turkey.

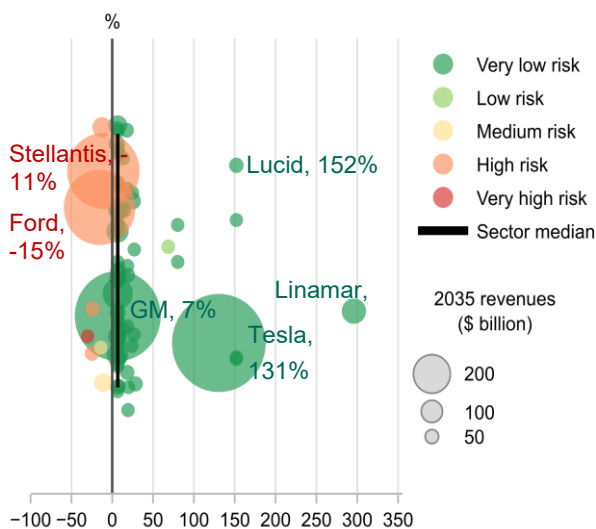
Zooming in to the company level, this balance of transition risks and opportunities creates winners and losers, but it's clear that there is considerable upside to capture.

In the automotive sector, for example, the dropoff in combustion car sales negatively impacts suppliers of traditional auto parts like engines, gearboxes, and exhaust systems according to our Transition Risk and Opportunity Tool (TRACT). But there is quite a high upside for those automakers investing in electric models and manufacturers of batteries. Across 89

companies in the Americas, revenue loss reaches \$55 billion under BNEF's Economic Transition Scenario, outweighed by a gain of \$182 billion.

The gains are concentrated among a handful of companies, like Tesla and General Motors. Two of the biggest domestic automakers, Ford and Stellantis, face high risk to revenue. Both have pumped the brakes on EV investments.

Figure 21: Automotive company revenue change under the Economic Transition Scenario, 2025-35



Source: BloombergNEF. Notes: Includes 89 selected companies based on revenues in 2035 with a BICS level 3 "Automotives" and only looks at Tier 1 companies. Vertical positioning of dots is for visibility and has no significance. Categorized per Bloomberg country of risk.

BNEF has also done this analysis across five sectors from power utilities to materials in its new Transition Risk and Opportunity Outlook, to be released during Climate Week.

For further information about the results provided in this research and our methodology, please reach out to support.bnef@bloomberg.com.

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