ESG Update

Global energy transition into spotlight: Record investment, slower growth

Key insights from BloombergNEF webinar

This week, we attended BloombergNEF's webinar *"Energy Transition Investment Trends 2026"*, which provided an overview of global capital flows across the energy transition. Overall, key takeaways include: **(i)** investment reached record levels in 2025, albeit with moderating growth; **(ii)** clean energy supply chains are experiencing divergent sector dynamics; and **(iii)** climate-tech financing has regained momentum.

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Energy transition hits new high, but pace moderates. Global energy transition investment reached a record US$2.3 trillion in 2025, but growth slowed to 8% YoY - the first single-digit increase in several years - signaling moderating momentum despite continued expansion. Electric vehicles attracted the largest share of capital, followed by renewable energy, with clean-energy investment outpacing fossil fuels for the 2nd consecutive year. Although renewable investment declined due to a slowdown in China, other major markets such as India and the US posted gains. At the same time, emerging technologies (including clean shipping and carbon capture and storage) continued to gain traction, accounting for a growing share of total funding. Looking ahead, while BNEF projects solid growth under its base-case scenario, investment levels remain far below what is required to align with a net-zero pathway, underscoring a persistent and significant financing gap.

Diverging paths across clean energy supply chains. Clean energy supply chain investment reached US$127bn last year, up 6% YoY, but trends diverged across sectors. Capital remained concentrated in battery manufacturing and its associated metals, supported by strong structural demand from electric vehicles and energy storage. In contrast, solar manufacturing investment fell sharply from its 2023 peak due to global overcapacity and policy uncertainty - particularly in China - while wind manufacturing continued to decline overall, even as capacity gradually expands into more localized and diversified markets. Overall, the data point to continued growth in supply chain spending, but with signs of sector rotation and normalization following earlier surges.

Energy transition finance gains renewed momentum. Climate-tech financing rebounded in 2025, driven by a sharp recovery in equity markets and continued expansion in debt issuance. After three years of decline, climate-tech equity financing surged 53% YoY to US$77.3bn, led by China's wave of public-market activity, including major offerings from BYD and CATL, which supported growth across clean power, energy storage and transport. At the same time, debt financing for the energy transition rose 17% YoY to US$1.2 trillion, with utilities and power-grid investments anchoring flows in mature sectors, while nuclear and hydrogen gained traction among emerging technologies. However, despite robust corporate issuance, public-sector debt declined as governments reduced labelled bond sales, highlighting a shift in the composition of transition finance.

Source: XP Research and BloombergNEF.

Energy transition hits new high, but pace moderates

EVs lead investment and emerging technologies accelerate

Global energy transition investment hits record, but growth slows. According to Bloomberg, global energy transition investments reached a record US$2.3 trillion in 2025. However, growth slowed to 8% YoY, marking the first single-digit increase in a few years (Figure 01). Notably, the largest share of investment went to electric vehicles (EVs), followed by renewable energy. When compared to fossil fuels, clean-energy investment outpaced fossil fuels for the 2nd consecutive year. Although the gap remains relatively narrow (at ~US$102bn), it has widened compared with 2024 and is expected to further increase looking forward.

Renewable energy investment declines amid China slowdown. Looking more closely at renewable energy, this segment was the second-largest after EVs, even with the drop in investments in 2025. This decrease was driven primarily by China, where newly introduced uncertainties dampened clean energy spending. In contrast, other major markets recorded growth. For example, India increased its investment from US$58.8bn to US$67.9bn in 2025, while the US also posted growth, despite reduced incentives and ongoing policy uncertainty surrounding subsidies.

Emerging technologies gain momentum. Within overall energy transition investments, Bloomberg also highlighted that funding for emerging technologies continues to rise (Figure 02), accounting for ~7.5% of total energy transition funding, with further growth expected. On a year-on-year basis, clean shipping and carbon capture and storage (CCS) recorded the strongest growth rates among these technologies.

Figure 01. Energy transaction investments *[US$bn]*

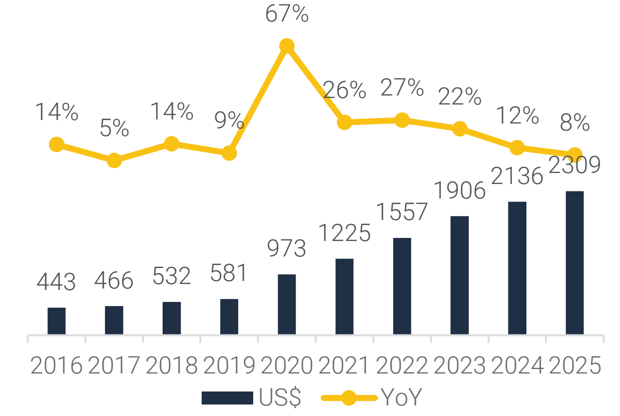
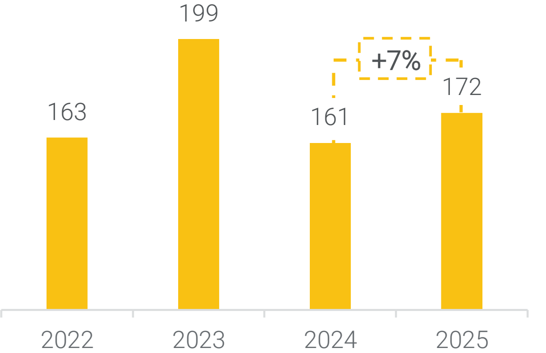
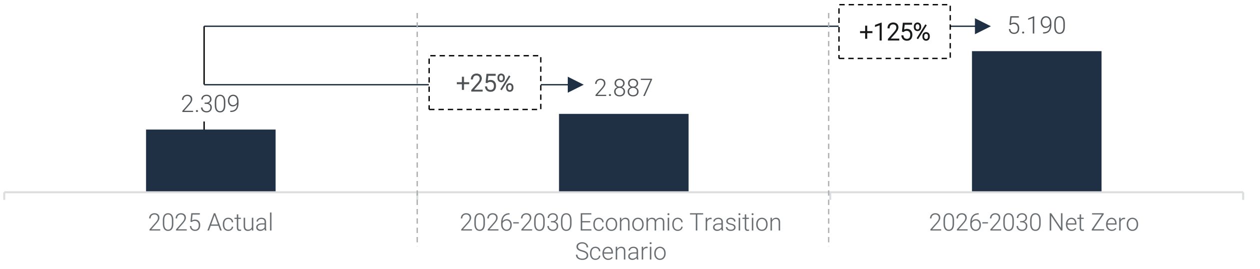


Figure 02. Investments in emerging sectors *[US$bn]*



BNEF projects solid growth, but net-zero demands more. Looking ahead, BloombergNEF (BNEF) projects a 25% growth rate in energy transition investment for the remainder of the decade under its base-case scenario. However, achieving a net-zero pathway would require investment growth of ~125%, highlighting the significant gap between current trajectories and climate targets (Figure 03).

Figure 03. Comparison of 2025 transition investment vs. annualized levels *[US$bn]*



Source: XP Research and BloombergNEF.

Diverging paths across clean energy supply chains

Strong EV and storage demand offset weakness in solar

US$127bn invested amid diverging sector dynamics. Clean energy supply chain investments reached US$127bn last year, representing 6% YoY growth. From a sector perspective, investment remains concentrated in four main supply chains, with different paths (Figure 04):

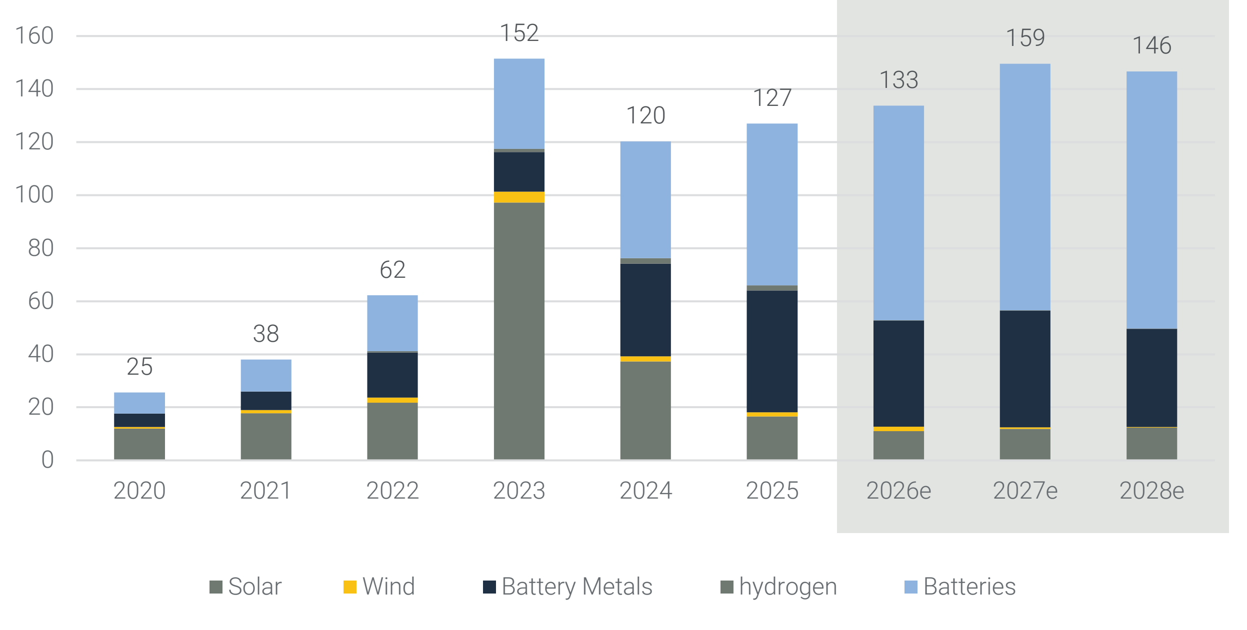
(i) Battery manufacturing: Despite concerns about overcapacity in China relative to global demand, battery manufacturing remains significantly more capital-intensive than other supply chain segments and continues to attract substantial investment. According to Bloomberg, the solid structural growth in electric vehicles (EVs) and energy storage systems are the key drivers supporting this momentum.

(ii) Battery metals[1]: This segment also saw strong investment inflows last year, reaching a peak of US$46bn. Even with forthcoming project announcements likely to push investment levels higher, Bloomberg expects a decline moving forward due to a low-price environment and oversupply.

(iii) Solar manufacturing: Following an exceptional surge in 2023 (when capital inflows reached US$97bn), investment declined sharply to US$16.6bn in 2025, largely driven by severe global overcapacity and increasingly cautious government policies. Looking ahead, fewer large-scale project announcements are expected, particularly in China amid rising regulatory uncertainty. Other regions, such as India, may still experience growth, albeit at a more moderate pace.

(iv) Wind manufacturing: Although global investment in wind factory construction continues to decline, Bloomberg notes an emerging shift. While overall volumes are smaller, manufacturing capacity is expanding into new localized markets, such as South Korea, reflecting a trend toward regional diversification of supply chains.

Figure 04. Global clean energy supply chain investments, by sector *[US$bn]*



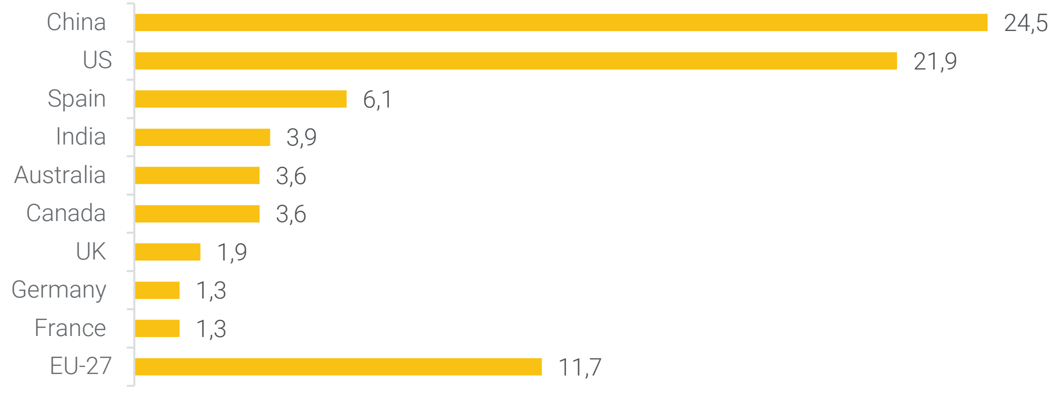
Source: XP Research and BloombergNEF. [1] Nickel, Cobalt and Lithium.

Energy transition finance gains renewed momentum

Surging equity issuance and steady debt growth

Climate-tech equity financing rebounds sharply in 2025. According to Bloomberg, after three consecutive years of decline, climate-tech equity financing surged 53% YoY in 2025, reaching US$77.3bn. China led the rebound (Figure 05), driven by a surge in public-market issuance, which increased 171% YoY, to US$24.5bn, largely boosted by multi-billion-dollar offerings from electric-vehicle maker BYD and the Hong Kong IPO of battery manufacturer CATL. This renewed momentum contributed to the strong performance across the largest climate-tech segments, including clean power, energy storage and transportation.

Figure 05. Climate-tech corporate finance by market in 2025 *[US$bn]*



Debt financing sustains energy-transition momentum. Debt financing for the energy transition also expanded in 2025, with total issuance rising 17% YoY to US$1.2 trillion. Utilities accounted for the largest share of issuance, anchoring financing flows in the leading markets. Companies with revenue exposure to mature transition sectors raised US$989bn in 2025 (Figure 06), supported by rapid growth in the power-grid segment, while financing for emerging sectors also strengthened, with nuclear and hydrogen companies raising a combined US$77bn (Figure 07). Despite robust corporate activity (where financing flows increased 20% YoY), public-sector debt issuance declined as governments scaled back labelled bond sales focused on mature transition segments.

Figure 06. Energy transition debt issuance for ´mature´ sectors *[US$bn]*

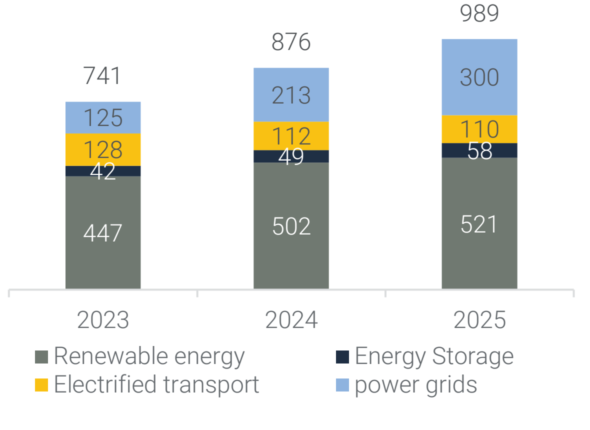
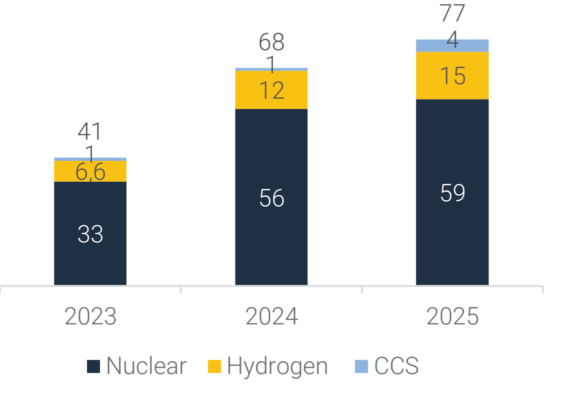


Figure 07. Energy transition debt issuance for ´emerging´ sectors *[US$bn]*



Source: XP Research and BloombergNEF.

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