What next for the energy transition?

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Key Takeaways

- 2024 saw significant changes in global leadership, bringing regulatory risks as new leaders attempt to reconcile the sustainability, security, and affordability objectives at the heart of energy policy making.
- Protectionist policies, such as the US Inflation Reduction Act and Europe's REPowerEU, are driving investments in low-carbon technologies but there are still no supply chains that can match Chinese offerings on price and quality.
- A growing alliance of emerging markets (BRICS) challenges Western geopolitical influence, impacting global energy and climate policy discussions.
- COP29's weak outcomes and declining climate activism signal a shift in focus toward energy security and affordability, rather than ambitious climate action, heading into 2025.

2024 saw several major developments in policy and markets that have shaped expectations for the energy transition in 2025. There are implications to consider for strategic commodities, as well as the overall climate and energy security goals associated with the energy transition.

Starting with policy, there are 4 key areas to review:

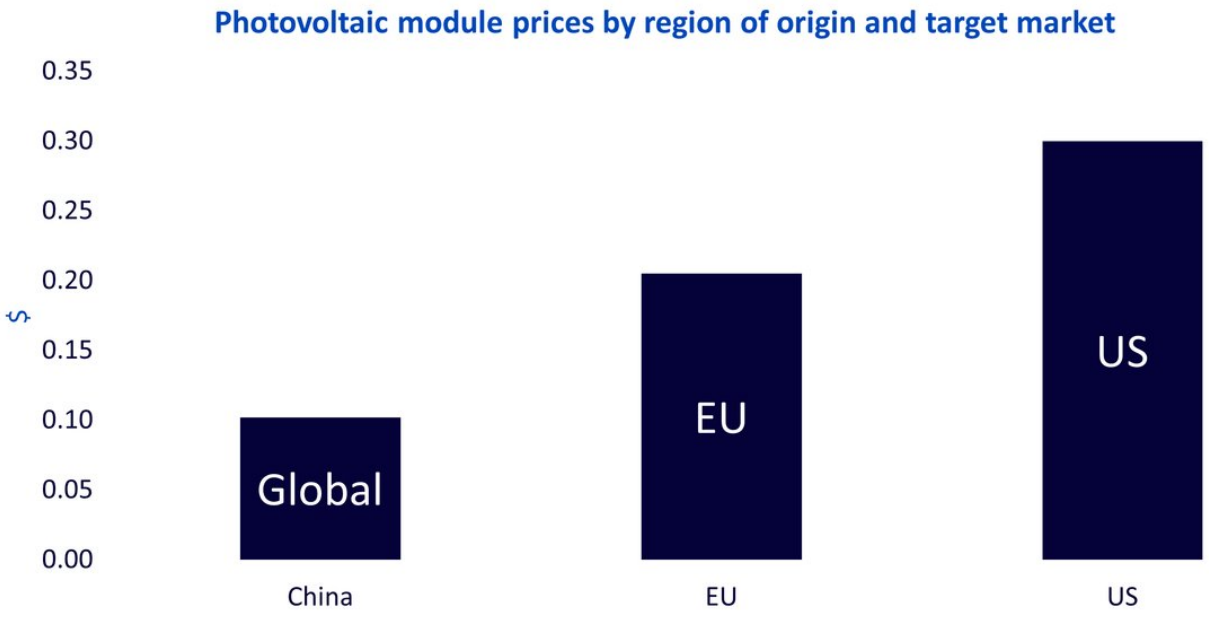
1. Changes in leadership

60% of the global economy’s citizenry were polled on their leaders in an almost unprecedented wave of democratic participation in 2024. In many cases, incumbents faced the wrath of electorates unhappy with micro and macroeconomic conditions. Ruling parties were pushed out of office or returned with weakened mandates. Donald Trump’s return to the White House will be the most closely watched transfer of power, but regulatory risks abound as new leaders attempt to reconcile the sustainability, security, and affordability objectives at the heart of energy policy making.

2. Economic nationalism

Policies based on protectionism, reshoring or friendshoring grabbed many headlines in 2024. Policy is framing a clear direction to a greener future with major initiatives, including the US’ Inflation Reduction Act and Europe’s REPowerEU, which offer generous incentives to promote low-carbon technologies. Japan, South Korea, China, Canada and India are following suit. Tariffs imposed against Chinese energy transition solutions, from electric vehicles (EVs) to solar panels, in US and European markets aimed at countering

what have been deemed unfair trading practices by China, will be a key feature of low carbon consumer choice and corporate procurement in 2025. Currently, there are no supply chains that can match Chinese offerings on price and quality, given the established dominance of low carbon solar PV modules (see below), as well as wind and battery value chains. That means a higher cost, lower quality energy transition.



Source: Wood Mackenzie, December 2024. Label represents the target market.

3. The multipolar world

2024 saw examples of an increasingly fragmented international system. New leadership with different views about multilateralism and US hegemony in international relations, the results of inward-looking economic nationalist policies, and the increasingly close strategic alliance of large emerging markets support the image of a world governed by multiple poles of power. Confident, assertive, and powerful, the loose alignment of Brazil, Russia, India, China, South Africa, Iran, and the United Arab Emirates (known as the BRICS+) expanded in number and influence in 2024, with reports of 13 more countries being asked to join. This group now presents a powerful counterweight to western diplomatic and military alliances seeking to respond to and/or resolve key flashpoints including Russia's invasion of Ukraine, the fall of Assad in Syria, and Israel's ongoing military actions against its neighbours.

4. Climate action

Finally, it is worth noting that 2024 saw a marked shift in the political narratives around climate action. The weak outcome of COP29, held in Baku in November, is representative of a practice which is focused on the implementation of commitments made in 2021-2023 on climate finance and greenhouse gas mitigation. Baku did offer a procedural result around Article 6 of the Paris Agreement, and this should be a boost for voluntary carbon markets and other transactional frameworks in the development and pursuit of the next

generation of nationally determined contributions to the Paris Agreement due in 2025. Notwithstanding this, climate action and climate activism by governmental and non-governmental organisations is at a low ebb heading into 2025 as questions of energy affordability and energy security are paramount.

Additionally, there are two key market considerations from 2024:

1. Macro expansion and market balances

The global economy grew in 2024 on trend, driven in large part by robust US economic activity, continued strong performance from select developed (Japan) and emerging (India) economies as well as stimuli from China's central government. The implications of this expansion of activity vary at the level of subsector or market segment. **Overall, we're consuming more energy than assumed in prior forecasts, with higher than previous emissions outturns following suit.**

One notable story for strategic commodities is **China's major focus on the new economy and low carbon supply chains**. The commodities they rely upon have continued to expand as a result. In some cases, the supply is outstripping demand and market imbalances have resulted; in 2024 oversupplies in nickel, cobalt and lithium grew. Markets appear to have been pricing in the risks of new political leaders and economic nationalism, betting a slow energy transition will result longer-term as supply demand balances flex in the short-term due to price and policy signals.

2. Electrification

A major market of growth in 2024, which is likely to maintain momentum in 2025, is power. Associated with the energy transition, but also the rise of artificial intelligence (AI), power demand is expected to jump to 36 PWh by 2030 in the base case, 22% higher than 2024. The vast majority of this is low carbon in the form of wind and solar. Cost competitive in some locations and breaking through into positive economics by policy support in others, the face of power sector investments is widely a green one. That said, nuclear power made a notable come back in the US in 2024, with the fate of some large reactors tied to data centres and small modular nuclear solutions promised for AI and other industrial applications. Consistent with lower carbon private and public sector requirements, nuclear demand is on the rise, boosting uranium value chains and the players positioned therein.

Outlook

The world is still not on track to meet the Paris Agreement's goals of limiting warming to no more than 1.5°C or even 2°C. Wood Mackenzie analysis reveals we are on a 2.5°C pathway in our base case, which supports different WisdomTree indices (including the WisdomTree Battery Solutions Index; WisdomTree Energy Transition Metals Commodity Index; WisdomTree Battery Metals Commodity Index; WisdomTree Energy Transition and Rare Earths Miners Index; WisdomTree Renewable Energy index).

Why so little progress? The war in Ukraine is a major factor, disrupting commodity markets and threatening energy security. Tensions in the Middle East have added to energy security fears. The global economy still runs on fossil fuels, with oil, gas and coal today meeting 80% of our energy needs. While low-carbon

energy is proliferating (supply is a third higher than in 2015) energy demand has grown faster still. The result is that global emissions are still rising and may not fall below 2023 levels for another five years.

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