

China's Electric Century: How the Electrostater Is Winning the Energy Geopolitical Race

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Credit: China Daily

Introduction

For more than a century, geopolitical influence rested largely on control over fossil fuels, particularly oil and natural gas. Global power ran on hydrocarbons. Countries possessing abundant hydrocarbon reserves or commanding strategic maritime chokepoints exercised disproportionate influence over global politics, trade, and security. That order is now being challenged by different kind of resource geography. Instead of oil fields and pipelines, competition increasingly revolves around batteries, electric vehicles (EVs), renewable energy technologies, smart grids, semiconductors, and critical minerals such as lithium, cobalt, nickel, and rare earth elements. This

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shift is described as the “electrostate”; a state whose economic strength, technological leadership, and geopolitical influence are built upon the production, control, and export of electrification technologies. Among all nations, China has emerged as the world's foremost electrostate, positioning itself at the center of the global energy transition through decades of industrial planning, technological investment, and strategic resource diplomacy. Previously, energy transitions evolved gradually through market forces. China’s rise has been driven by an integrated state-led strategy. Beijing recognized early that the global move toward decarbonization would fundamentally alter international power dynamics. So, they invested heavily in renewable energy manufacturing, battery innovation, electric mobility, and supply chain control long before many advanced economies fully appreciated their strategic significance. Today, China dominates nearly every segment of the clean energy value chain. From mining and mineral processing to battery production, solar panel manufacturing, wind turbine components, and EV exports, they’re thriving. As the world accelerates toward net-zero emissions, China's leadership in these sectors is providing it with new forms of geopolitical leverage and rivalry with oil producing states.

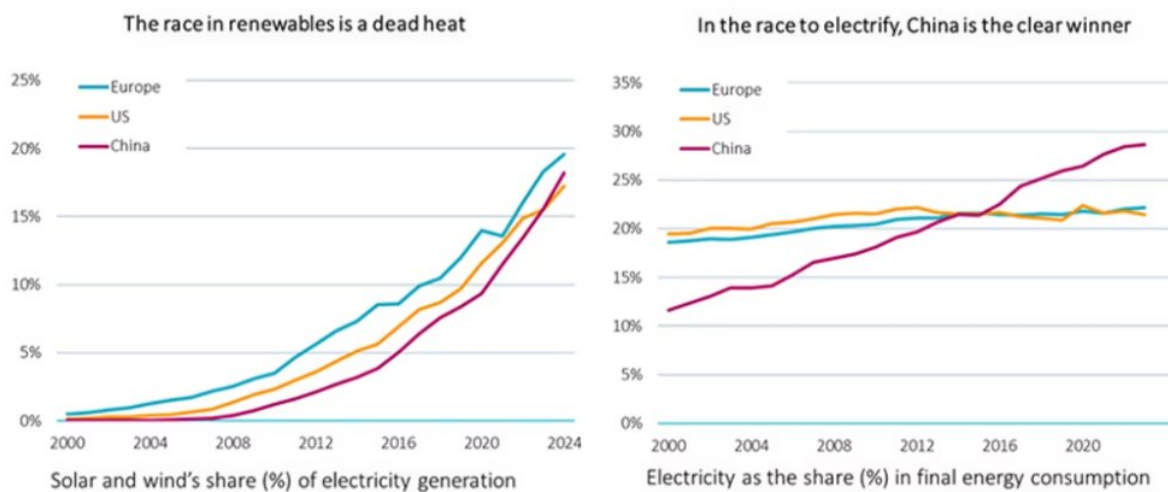
From Petrostates to Electrostates

The term electrostate has been there from not too long ago. Historically, energy geopolitics revolved around securing access to fossil fuels. The twentieth century witnessed numerous conflicts, alliances, and diplomatic arrangements shaped by oil dependence. From Gulf Wars to competition over pipeline routes across Eurasia. Energy security was synonymous with ensuring uninterrupted supplies of crude oil and natural gas. Countries lacking domestic hydrocarbon resources often remained vulnerable to supply disruptions and price shocks. The ongoing energy transition is fundamentally altering this equation. Electricity generated from renewable sources increasingly substitutes fossil fuels in transportation, manufacturing, and household consumption. This introduces a different form of dependency. Unlike oil, renewable technologies rely heavily on sophisticated manufacturing ecosystems, advanced battery technologies, and critical minerals concentrated within relatively few supply chains. A nation that derives geopolitical weight not from fossil fuel reserves but from various supply chains of electrification like critical minerals, battery manufacturing, semiconductors, and clean energy technology such as solar, wind, and electric vehicles is called a electrostate. Thus, geopolitical competition is shifting from controlling

fuel extraction aka petrostates toward controlling technology production, mineral refining, and industrial capacity aka electrostates.

China understood this transformation earlier than any other competitors. Rather than dominating on global oil market, Beijing concentrated on securing upstream mineral supplies while simultaneously investing in downstream manufacturing capabilities. China's transition into the world's primary electrostate is not merely an environmental policy choice; it is a grand strategic realignment centered on national security, industrial supremacy, and economic sovereignty.²

Figure 1 & 2 : China is surging ahead of the US and EU in the electrification of its economy



China paces ahead in electrification, while Europe and the US flatline. Source: Ember, IEA, 2025.

China's Industrial Policy as Strategic Architecture

China's leadership in electrification did not emerge overnight. It reflects more than two decades of coordinated industrial policy aimed at transforming the country from the "factory of the world" into a technological superpower. Beginning in the early 2000s, Chinese policymakers identified renewable energy, advanced manufacturing, artificial intelligence, and electric mobility as

² Qi, Niusa Shafiabady Xiaoying. 2025. "China Sparks the Rise of the 'Electrostate' Era." China Factor. September 25, 2025. <https://chinafactor.news/2025/09/25/china-sparks-the-rise-of-the-electrostate-era/>.

strategic sectors capable of driving long-term economic growth while reducing dependence on imported fossil fuels.

China has officially rolled out its plan for renewable energy development during the 15th Five-Year Plan period (2026-2030), the National Energy Administration (NEA) said on July 23, 2026. According to the document, total consumption of renewable energy is expected to reach approximately 1.8 billion tonnes of standard coal equivalent by 2030. Also by 2030, total installed capacity of renewable energy power generation is projected to reach about 3.5 billion kilowatts (kW), with an annual power generation of roughly 6 trillion kilowatt-hours (kWh). The combined installed capacity of wind and solar power is expected to exceed 2.8 billion kW, with annual power generation surpassing 4 trillion kWh.³

Policies like Made in China 2025 strategy and successive Five-Year Plans are directed massive public investment toward domestic research and development, encouraged state-owned enterprises and private firms to scale production, and created favorable financing mechanisms for strategic industries. Unlike many Western economies that relied primarily on market incentives, China combined industrial subsidies, public procurement, export promotion, and coordinated infrastructure development into a comprehensive national strategy. The objective extended beyond achieving energy security; it sought technological self-sufficiency and global industrial leadership.⁴

China's strategy has been its willingness to accept short-term economic costs in pursuit of long-term strategic gains. For years, Chinese manufacturers operated with narrow profit margins while expanding production capacity in solar panels, batteries, and EVs. Government support insulated many firms during periods of weak profitability, allowing them to achieve economies of scale that foreign competitors struggled to match. Today, these investments have translated into overwhelming manufacturing dominance across several clean energy sectors. The result is an industrial ecosystem that integrates mining, processing, manufacturing, logistics, research, and

³ "China: In Pole Position to Be the Globe's First Electrostade | Robeco Global." 2026. Robeco.Com - The Investment Engineers. <https://www.robeco.com/en-int/insights/2026/03/china-in-pole-position-to-be-the-globe-s-first-electrostade>.

⁴ 陈笛. 2026. "China Unveils Five-Year Plan for Renewable Energy Development." Www.Gov.Cn. 2026. https://english.www.gov.cn/news/202607/23/content_WS6a617ed3c6d00ca5f9a0c5e8.html.

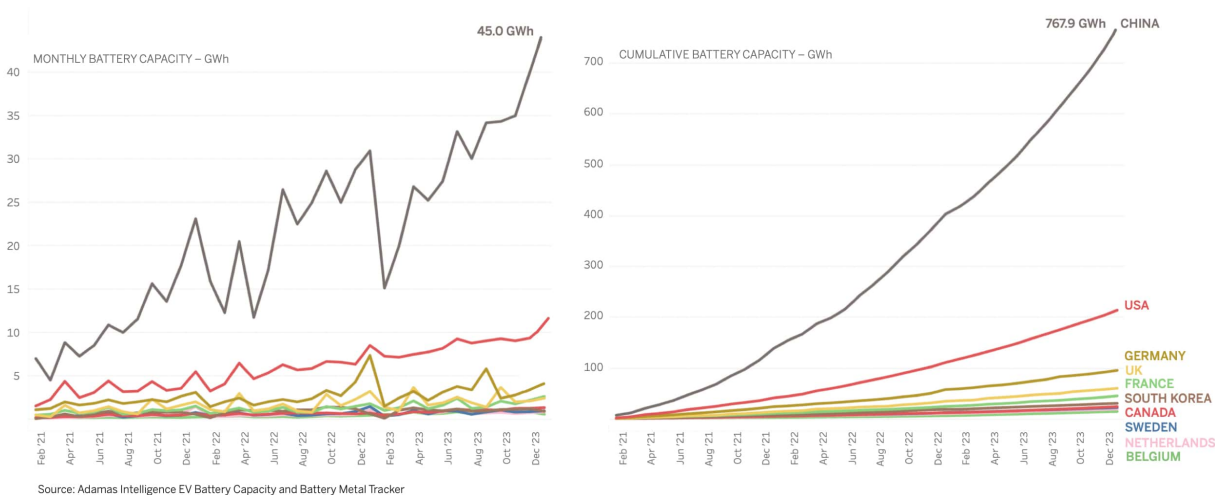
export under one coordinated framework. As geopolitical competition intensifies, this integrated model increasingly functions as a strategic asset comparable to traditional military capabilities.⁵

Dominating the Electric Vehicle (EV) Revolution

CHINESE EVs PULL AWAY FROM RIVALS

Adamas Intelligence

Combined battery capacity of all EVs, including hybrids, sold in top 10 markets 2021–2023 (GWh)



Source: Adamas Inside

China's electrostate strategy more visible than in the electric vehicle industry. Over the past decade, China has transformed itself into the world's largest producer, consumer, and exporter of EVs. Companies such as BYD, SAIC, Geely, XPeng, and NIO have evolved from domestic manufacturers into globally competitive firms challenging long-established automotive giants in Europe, Japan, and North America. Electric car sales grew by 20% globally to exceed 20 million in 2025, meaning one-quarter of all new cars sold were electric. The current high oil price situation is drawing consumer attention to the economic benefits of EVs more and more.⁶ Chinese firms produce more than half of the world's lithium-ion batteries, and BYD has overtaken Tesla as the

⁵ Kennedy, Scott. 2015. "Made in China 2025." Center for Strategic and International Studies.

<https://www.csis.org/analysis/made-china-2025>.

⁶ Naughton, Barry. 2021. "The Rise of China's Industrial Policy 1978 To 2020."

https://docs.dusselpeters.com/CECHIMEX/Naughton2021_Industrial_Policy_in_China_CECHIMEX.pdf.

world's largest electric vehicle manufacturer.⁷ According to industry tracking, China's clean-energy export basket; batteries, solar panels, wind components, EVs, and grid equipment rose from roughly \$32 billion in 2018 to approximately \$145 billion in 2025, with Chinese factories accounting for around 80 percent of global solar panel output and 60 percent of wind turbine production.⁸



A view of the production line at Nio, a Chinese electric vehicle maker. Credit: Reuters

Government policy played a decisive role in nurturing this transformation. Chinese authorities introduced generous purchase subsidies, invested extensively in charging infrastructure, and encouraged local governments to procure electric buses and public transportation fleets. Simultaneously, strict fuel economy standards forced domestic automakers to accelerate EV production. These measures created an enormous domestic market that allowed Chinese manufacturers to refine technologies, reduce production costs, and achieve unparalleled economies of scale. By 2024, China accounted for well over half of global EV sales and became the world's leading exporter of electric vehicles, surpassing Japan in overall automobile exports.⁹ Chinese

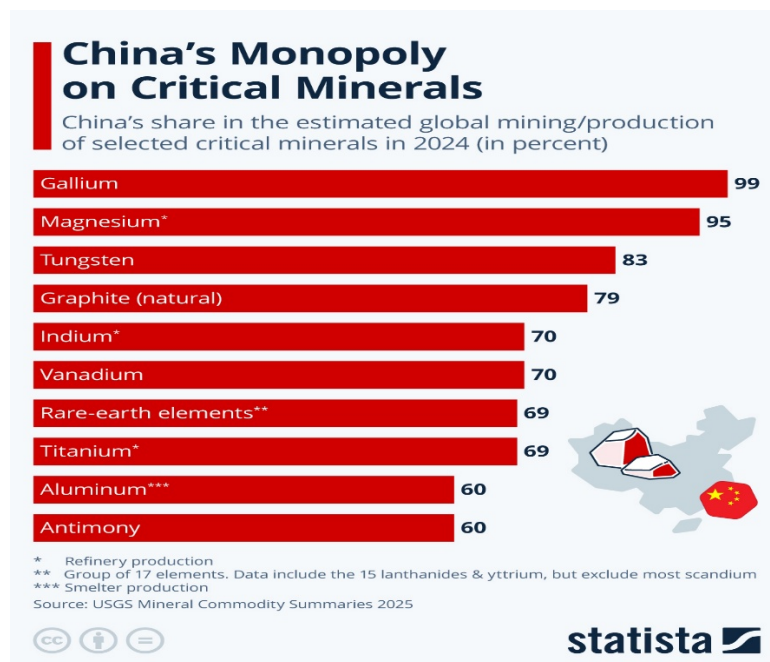
⁷ Global EV Outlook 2026 – Analysis - IEA. 2026. “Global EV Outlook 2026 – Analysis - IEA.” IEA. <https://www.iea.org/reports/global-ev-outlook-2026>.

⁸ Gordon, Sandra. 2025. “From Petrostates to Electrostates: The New Geopolitics of Energy.” Financial Mail. October 23, 2025. <https://www.financialmail.businessday.co.za/fm/features/2025-10-23-from-petrostates-to-electrostates-the-new-geopolitics-of-energy/>.

⁹ Barrak Almubarak. 2026. “Asymmetric Dependencies: China’s Electrostate and the Global South.” Geopolitical Monitor. <https://www.geopoliticalmonitor.com/asymmetric-dependencies-chinas-electrostate-and-the-global->

companies now produce affordable EVs that are increasingly penetrating markets across Southeast Asia, Latin America, Africa, and even Europe. Their competitiveness stems not only from lower labor costs but also from China's integrated battery supply chain, advanced manufacturing capabilities, and continuous technological innovation. The rapid international expansion of Chinese EVs carries important geopolitical implications. Countries adopting Chinese vehicles may also become dependent on Chinese battery technologies, charging infrastructure, software ecosystems, and maintenance networks.

The Critical Minerals Advantage



It may seem like China's greatest geopolitical advantage now is being the electrostate, having the best EVs and solar panels. But it's far deeper than that. Their dominance over critical mineral supply chains is the real reason. Every lithium-ion battery, wind turbine, solar panel, and advanced semiconductor depends on a complex network of minerals, including lithium, cobalt, nickel, graphite, copper, and rare earth elements. Although China does not possess the world's largest reserves of many of these resources, it has strategically positioned itself as the indispensable processor and refiner of critical minerals. This is crucial because raw mineral extraction alone

generates limited geopolitical leverage, while the refining and processing stages transforms ores into industrial inputs. Over the past two decades, Chinese firms have invested aggressively in mining operations across Africa, Latin America, and Southeast Asia while simultaneously building vast domestic refining capacity. Today, China refines the majority of the world's lithium, cobalt, graphite, and rare earth materials, enabling it to dominate the intermediate stages of global clean energy manufacturing.

Battery Supremacy: The New Oil Industry

If oil defined the industrial economy of the twentieth century, batteries are rapidly becoming the strategic commodity of the twenty-first. Batteries determine the competitiveness of electric vehicles, renewable energy storage systems, consumer electronics, and increasingly even military technologies. China recognized this reality long before many Western economies and invested heavily in developing domestic battery champions capable of competing globally. Chinese companies, particularly CATL and BYD, have become dominant players in the global battery industry through sustained investment in research, manufacturing efficiency, and technological innovation. CATL consistently ranks as the world's largest producer of EV batteries, supplying numerous international automakers, while BYD has evolved into both a leading battery manufacturer and one of the world's largest electric vehicle companies. Their success stems from deep integration with domestic mineral processing, close collaboration with Chinese research institutions, and extensive government support during the industry's formative years. China's battery dominance extends beyond production volumes. Chinese firms increasingly shape technological standards, manufacturing processes, and next-generation battery chemistries such as sodium-ion batteries. This innovation capacity reduces dependence on scarce minerals while reinforcing China's technological leadership. As battery technology becomes central not only to civilian transportation but also to grid resilience and military logistics, China's position in this sector translates into strategic influence across multiple dimensions of international security.

The Belt and Road Initiative: Exporting the Electrostate

China's energy strategy extends beyond domestic industrial development through the Belt and Road Initiative (BRI), which has evolved into an important instrument of energy diplomacy.

Initially associated primarily with fossil fuel infrastructure, ports, and transportation networks, the BRI has increasingly incorporated renewable energy projects, electricity transmission systems, battery manufacturing, and green infrastructure. Beijing's "Green Belt and Road" initiative reflects an effort to align overseas investments with global climate objectives while expanding Chinese technological influence.

Chinese companies have financed and constructed solar farms, wind parks, hydropower facilities, and electricity grids across Asia, Africa, the Middle East, and Latin America. These investments not only create commercial opportunities for Chinese firms but also establish long-term technological partnerships with host countries. Equipment maintenance, software upgrades, financing arrangements, and technical assistance often ensure continuing relationships extending decades beyond project completion.

For many developing countries, Chinese renewable technologies offer affordable alternatives to Western suppliers. Beijing's willingness to provide concessional financing, engineering expertise, and integrated project delivery has strengthened its appeal across the Global South. In regions facing urgent energy deficits, China's ability to rapidly deploy renewable infrastructure enhances both its economic presence and diplomatic influence. Nevertheless, the Green BRI also faces criticism. Concerns persist around debt sustainability, transparency, environmental standards, and geopolitical dependency. Critics argue that infrastructure financed by Chinese institutions may increase recipient countries' long-term economic reliance on Beijing, while supporters contend that these investments address critical infrastructure gaps neglected by Western development finance.

The Weaponization of the Chokepoint

Dominance of a supply chain is one thing; the willingness to use it coercively is another. Beijing's rare earth and critical mineral export control regime, which began escalating in 2023 with restrictions on gallium, germanium, graphite, and antimony, expanded substantially through 2025 and into 2026.¹⁰ In April 2025, China's Ministry of Commerce imposed national-security-based

¹⁰ Ghosh, Aritrika. 2026. "China's Green Silk Road: How 2026 Renewable Energy Projects Are Powering a Global Sustainable Future." Travel And Tour World. March 20, 2026.

licensing requirements on seven elements: samarium, gadolinium, terbium, dysprosium, lutetium, scandium, and yttrium; explicitly framed as retaliation for new American tariffs. By October 2025, ahead of a planned Trump-Xi meeting in South Korea, Beijing tightened further. They applied for the first time a foreign direct product rule mechanism long used by Washington itself, and denied export licenses to any firm affiliated with foreign militaries, including the United States.¹¹ Analysts found that the effects were successful, yttrium exports to the United States fell from roughly 333 tons in the eight months before restrictions to just 17 tons afterward, with prices reportedly rising by as much as 60 percent in a matter of months and by multiples of last year's levels overall. This campaign is distinctive because it is not primarily about scarcity, but about control of the capital-intensive midstream processing stage, where it commands roughly 90 percent of global capacity along with dominant shares of tungsten and antimony refining. Analysts found this deliberate pattern of tightening and loosening restrictions which is calibrated to preserve pricing power, extract diplomatic concessions, and discourage the kind of large, multi-year Western capital investment that would be needed to build durable alternatives.¹²

The Western Response

China's remarkable rise as the world's leading electrostate has fundamentally altered policy thinking in Washington, Brussels, Tokyo, and other advanced economies. For decades, Western governments largely viewed globalization through the lens of efficiency, allowing supply chains to migrate toward lower-cost manufacturing hubs. However, the COVID-19 pandemic, semiconductor shortages, geopolitical tensions, and China's growing dominance in clean energy technologies exposed the vulnerabilities created by excessive dependence on a single supplier. Consequently, the energy transition is no longer viewed solely as an environmental imperative but also as a matter of economic security and national resilience.

<https://www.travelandtourworld.com/news/article/chinas-green-silk-road-how-2026-renewable-energy-projects-are-powering-a-global-sustainable-future/>.

¹¹ "China's Strategic Use of Trade Controls." 2026. Center for Security Studies. <https://css.ethz.ch/en/center/CSS-news/2026/04/chinas-strategic-use-of-trade-controls.html>.

¹² Baskaran, Gracelin. 2025. "China's New Rare Earth and Magnet Restrictions Threaten U.S. Defense Supply Chains." Csis.Org. <https://www.csis.org/analysis/chinas-new-rare-earth-and-magnet-restrictions-threaten-us-defense-supply-chains>.

The United States has responded by adopting an ambitious industrial policy centered on rebuilding domestic manufacturing capacity. The Inflation Reduction Act (IRA) of 2022 represents one of the largest clean energy investment packages in American history, offering hundreds of billions of dollars in tax incentives for electric vehicles, battery production, renewable energy deployment, and critical mineral processing.¹³ Importantly, many incentives are tied to domestic manufacturing or sourcing from allied countries, reflecting a deliberate effort to reduce reliance on Chinese supply chains. Similarly, the Bipartisan Infrastructure Law and the CHIPS and Science Act complement this strategy by strengthening energy infrastructure and advanced manufacturing capabilities.

The European Union has launched the Green Deal Industrial Plan, the Net-Zero Industry Act, and the Critical Raw Materials Act to strengthen domestic production of batteries, renewable technologies, and strategic minerals. Brussels increasingly frames "strategic autonomy" as essential to achieving climate goals without replacing dependence on Russian hydrocarbons with dependence on Chinese clean technologies. Rather than pursuing complete decoupling, European policymakers advocate "de-risking"; diversifying supply chains while maintaining selective economic engagement with China. The European Union has launched the Green Deal Industrial Plan, the Net-Zero Industry Act, and the Critical Raw Materials Act to strengthen domestic production of batteries, renewable technologies, and strategic minerals. Critical Raw Materials Act, in force since 2024, has approved dozens of strategic projects both within and outside the bloc, even as more than 80 percent of European firms reportedly remain dependent on Chinese supply chains for materials essential to defense, EVs, and renewable energy, with licensing approval rates for some sectors falling below 25 percent during the tightest periods of restriction.¹⁴ Brussels increasingly frames "strategic autonomy" as essential to achieving climate goals without replacing dependence on Russian hydrocarbons with dependence on Chinese clean technologies. Rather than pursuing complete decoupling, European policymakers advocate "de-risking"—diversifying supply chains while maintaining selective economic engagement with China.

¹³ "China's 2026 Export Controls Redraw the Global Supply Chain Map." 2026. Rare Earth Exchanges. <https://rareearthexchanges.com/news/chinas-2026-export-controls-redraw-the-global-supply-chain-map/>.

¹⁴ Internal Revenue Service. 2022. "Inflation Reduction Act of 2022 | Internal Revenue Service." Wwww.Irs.Gov. <https://www.irs.gov/inflation-reduction-act-of-2022>.

Implications for the Global South: Between Opportunity and Dependence

For developing countries, China's electrostate presents both significant opportunities and complex strategic dilemmas. Affordable Chinese solar panels, batteries, and electric vehicles have accelerated clean energy adoption across Asia, Africa, and Latin America. Countries that previously struggled to finance renewable infrastructure now have access to comparatively inexpensive technologies, contributing to improved energy access, lower electricity costs, and reduced greenhouse gas emissions.

However, dependence on Chinese technology also raises important concerns regarding long-term economic resilience. Many developing economies risk becoming consumers rather than producers within the global electric economy. Without domestic industrial strategies, technology transfer, or investment in local manufacturing, these countries may remain dependent on imported equipment, limiting their ability to capture the economic benefits associated with the energy transition.

Bangladesh offers a particularly relevant example. The country has made notable progress in expanding renewable energy, particularly solar home systems, yet its broader energy transition remains heavily dependent on imported technologies. As Bangladesh pursues its Smart Bangladesh Vision 2041 and seeks to diversify its energy mix, Chinese investment in renewable infrastructure and electric mobility may provide valuable opportunities. Nevertheless, Dhaka must carefully balance economic cooperation with efforts to diversify suppliers, strengthen domestic technical capabilities, and attract investment from multiple international partners. A balanced strategy would enhance energy security while minimizing strategic vulnerabilities arising from excessive dependence on any single external actor. More broadly, the Global South should view electrification not merely as an environmental agenda but as an industrial development opportunity. Countries capable of integrating into clean energy value chains will be better positioned to benefit from the emerging electric economy.

Conclusion

The global transition from fossil fuels to clean energy represents far more than an environmental transformation; it marks the emergence of a new geopolitical order in which industrial capacity,

technological innovation, and supply chain control increasingly define national power. China's rise as the world's foremost electrostate illustrates how strategic industrial policy, long-term planning, and sustained investment can reshape the international balance of power. By integrating critical mineral processing, battery production, renewable manufacturing, electric mobility, and global infrastructure financing into a coherent national strategy, Beijing has positioned itself at the center of the twenty-first-century energy economy. energy transition is simultaneously an industrial, technological, and geopolitical transformation. Countries that merely import clean technologies may reduce emissions, but those that manufacture, innovate, and control strategic supply chains will shape the future distribution of global power. China has taken an early lead, but whether it ultimately defines the electric century will depend on how successfully other powers respond to this unprecedented transformation.