

How Trump's Re-election is Shaping the Energy Transition and Grid Infrastructure Markets in the US

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It is safe to say that the latest United States election, compared to all previous ones, was the most anxiously followed by the energy sector, given the profound implications of the potential policy changes under the Trump administration. With Donald Trump elected as the president of the United States, stakeholders in the energy transition space are contemplating what is next.

There is a potential for several Biden-era policies and incentives like the IRA to be rolled back, leaving businesses and investors in the energy transition space worried about the future. But would the impact really be this negative? In this piece, we are examining the impact of the 2024 election result with a Republican win and Trump presidency on three specific markets: renewable energy, power grid equipment, and e-mobility. Let's get into these one by one.

Future of Renewable Energy in the US

Trump's skepticism around renewable energy is no secret. His recent campaign promises to scrap offshore wind projects and roll back subsidies under the IRA, which have been central to his proposed energy policy.

However, reversing these incentives and halting the country's renewable energy growth may not be straightforward for the new administration. For instance, President Biden has made significant strides in advancing the renewable energy agenda, even in the final weeks leading up to the transition to the Trump administration. An example of that is his launching a review of some offshore wind projects via the Bureau of Ocean Energy Management. Trump's Energy department pick, Chris Wright, has also made rather positive or neutral statements about renewable energy more recently during his senate confirmation hearing. He told the senate committee that (climate change) "is a challenging issue and the solution to climate change is to evolve our energy system..."





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Are there things we can do, such as investments together through the Department of Energy, to accelerate the development of new energy technologies that are really the only pathway to address climate change? Absolutely...Energy and climate is a global problem...I think President Trump is firmly aligned with that position as well." He, however, also gave a pro-fossil fuel statement, mentioning that they have "fallen out of fashion and out of favor... there's been less interest to invest in it... I don't share those aversions. I'm all about new technology to improve energy sources across the board". This indicates a rather neutral stance might be the case as the new administration takes hold.



Most importantly, the US renewables market today is very different from that of Trump’s previous presidency. Over the last few years, renewables have become an important part of the US energy mix, accounting for more than 20% of the electricity generation (in 2023), according to the US Energy Information Administration, with wind and solar accounting for close to 15%. Renewables will continue to enjoy certain state-level support, especially in the case of onshore wind. So even though there would be changes to the renewables policy under the new administration, the complete rollback of IRA incentives is highly unlikely. Most of the incentives and investments under the IRA have been going to Republican-held congressional districts, leading to new jobs and economic growth, which would be difficult for Trump to stop right away.

Considering all these factors in its favor, renewables adoption will continue in the US. However, offshore wind will face headwinds, and the projects will be at risk of delays due to the suspension of leasing and permitting of federal land until environmental and economic review.

PTR’s research estimates that offshore wind capacity, previously expected to reach 30GW by 2030, could decline to 10GW under less supportive policies.

Impact on the Power Grid Equipment Market

For a long time, the US power grid equipment market has been driven by the increasing demand for electricity and renewable integration, leading to modernization and upgrade/ replacement requirements of the existing aging infrastructure. Despite offshore wind adoption slowing down, we expect the demand for electrical equipment, including transformers and switchgear, to continue growing sustainably until the end of this decade. With increasing electricity demand from sectors like data centers due to AI growth and increasing need for upgradation or replacement projects to ensure reliability and security of supply, high single-digit growth in equipment demand is expected in the US market.

What would possibly change, however, is where this equipment is sourced from. For example, the US has historically relied on importing both power and distribution transformers to address the local demand. More than half of the power transformers and close to a quarter of distribution transformers installed every year in the US are imported. In the past, we have seen import duties being extended on large power transformers from South Korea as well as a ban on Chinese transformers driven by national security concerns about dependence on foreign-made equipment for secure electricity supply. These bans or a higher import duty are expected to continue in this term as well.

With this increasing push to manufacture products within the US, as well as recent supply chain disruptions causing a major supply-demand gap globally, several transformers manufacturers have announced plans to establish or expand production locally in the US. This is likely to continue or accelerate under the new administration, especially given the expected corporate tax rate cuts and decreased red tape for local manufacturing.

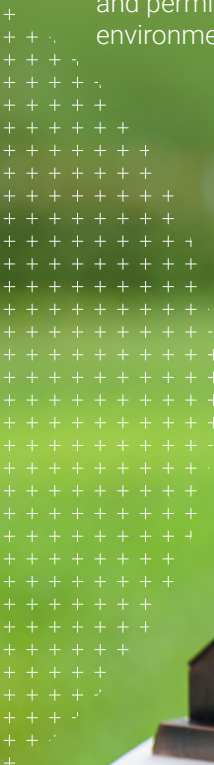


Photo: Shutterstock

List of Announced Transformers Production Capacity Expansions in the US

Company	Trafo. Type	Investment (M USD)	Location	Investment Year
Hitachi Energy	DTR	25	South Boston, Virginia	2024
Hitachi Energy	DTR	10	Jefferson City, Missouri	2022
Eaton	DTR	22	Waukesha	2023
Maddox Industrial	DTR	N.A.	Batavia, Ohio	2023
Cleveland-Cliffs	DTR	150	Weirton, West Virginia	2024
Central Moloney	DTR	50	Okaloosa County, Florida	2023
Central Moloney	DTR	20	Panama City Beach, Florida	2022
Prolec GE	DTR	28.5	Caddo Parish, Louisiana	2023
Westrafo	DTR	15	Trotwood, Ohio	2024
Hitachi Energy	PTR	37	South Boston, Virginia	2022
Siemens Energy	PTR	150	Charlotte, North Carolina	2024
Hyosung	PTR	50	Memphis	2024
HD Hyundai USA	PTR	15	Montgomery, Alabama	2024
Delta Star	PTR	30	Lynchburg, Virginia	2023
WEG	PTR	17	Missouri	2021

Table 1. List of Announced Transformers Production Capacity Expansions in the US.
Source: PTR Inc.

Impact on the E-Mobility Sector

Perhaps the sector most affected by Trump’s return to the White House would be e-mobility in the US. The adoption of EVs and the installation of EV charging infrastructure would slow down in the US under the new administration.

One of the central issues is Trump revoking federal tax incentives for EVs, including the widely used \$7,500 consumer tax credit under IRA. This move would directly impact the much-debated topic of EV affordability and adoption rates. Additionally, if the incentives on the supply side are repealed, it can impact the manufacturers who are still reliant on subsidies to compete with internal combustion engine vehicles. While companies like Tesla, with their profitability and scaled production,

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may navigate these changes more effectively, other players could face significant challenges. The stakes are particularly high for EV manufacturers due to significant capital tied up in factory investments. As of September 2024, over \$260 billion (source: Atlas Public Policy) has already been allocated to U.S.-based EV manufacturing projects, with 70% of that amount invested in factories currently under construction. For many OEMs, these facilities represent a long-term bet on federal and state-level support for EV adoption. Any policy reversals that dampen demand for EVs could leave this capital stranded, posing serious financial risks for manufacturers. Any unspent funds from the charging infrastructure benefits of up to \$100K per business for installing EV chargers have also been frozen, which will delay the installation of new infrastructure.

U.S. Transport Electrification Forecast Ahead of Trump Presidency (2024-2035)

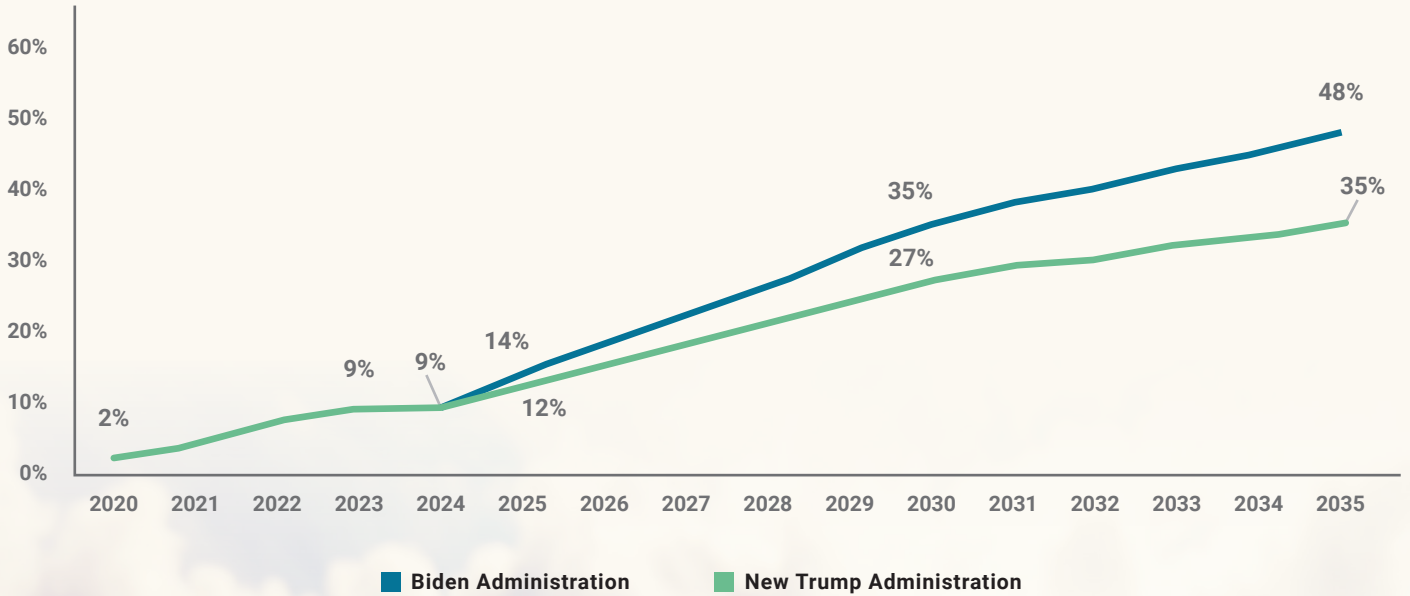


Figure 1. Market share scenarios of EVs (BEV & PHEV) in new light vehicle sales. Source: PTR Inc.





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The transition to a cleaner energy future is at a crossroads. Trump's policies could slow the pace of change, reshaping the EV and renewable energy industries in ways that will test the resilience of both established players and new entrants.

Trade policies are also expected to become more protectionist, with proposed tariffs on Chinese imports potentially doubling current rates. For the EV industry, this means accelerated duties on battery materials and components, potentially beginning in 2025 rather than the phased timeline ending in 2026 under Biden. Manufacturers relying on Chinese supply chains face rising costs, which could force a shift toward localized production. Meanwhile, Trump's intention to renegotiate the U.S.-Mexico-Canada Agreement (USMCA) adds another layer of complexity. While a full repeal of the agreement seems unlikely due to regional economic dependencies, the renegotiation could disrupt cross-border supply chains for automotive and battery manufacturing.

Given all these factors, PTR's projections suggest a slight slowdown in EV adoption by the end of this decade if these incentives are rolled back. While the previous forecast anticipated EV penetration to reach 35% by 2030, a more conservative estimate under Trump's policies could lower this to 27%. State-level regulations, such as

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California's Advanced Clean Cars Program, could also come under federal scrutiny. Should Trump repeal California's waiver allowing stricter state emissions standards, EV mandates across 12 other states could be weakened, further dampening growth.

What Lies Ahead

The transition to a cleaner energy future is at a crossroads. Trump's policies could slow the pace of change, reshaping the EV and renewable energy industries in ways that will test the resilience of both established players and new entrants. For businesses operating in these sectors, adaptability will be critical as they navigate shifting regulations and evolving market dynamics. It would be critical to understand and leverage the state and local support for energy transition to navigate any policy headwinds from US federal policies.

While a more fossil fuel-friendly federal government may create short-term challenges, long-term trends still favor the energy transition. We believe that the companies that can successfully navigate and position themselves around these challenges by closely monitoring the policy developments and adapting their go to market strategies, accordingly, will continue to make progress and emerge stronger.

As a market research leader in the electrical assets and infrastructure space, PTR's focus remains on providing actionable insights to help stakeholders anticipate and respond to these changes.

About PTR

"With over a decade of experience in the Power Grid and New Energy sectors, PTR Inc. has evolved from a core market research firm into a comprehensive Strategic Growth Partner, empowering clients' transitions and growth in the energy landscape and E-mobility, particularly within the electrical infrastructure manufacturing space."