

Renewable Energy's Resilience Beyond the 2024 Election

With the 2024 US presidential election approaching, investors may have questions about how the political landscape could affect energy transition investment. However, despite political rhetoric, the momentum behind clean energy remains strong, driven by legislative support and economic realities. In this white paper, we explore why we believe the renewable energy sector is poised to continue its growth, particularly given policy tailwinds that are unlikely to disappear, irrespective of political shifts in the White House.

Bipartisan support for renewable energy

A critical factor supporting renewable energy investment post-2024 is the well-supported legislative framework underpinning investment incentives. In particular, the Investment Tax Credit (ITC) and Production Tax Credit (PTC) programs have been instrumental in supporting the growth of the solar and wind energy industries to date. Historically, these tax credits have enjoyed bipartisan support, even during periods when the broader Republican party did not strongly favor renewable energy.

While ITCs were originally created under Democratic President Jimmy Carter in the late 1970s,¹ renewables tax advantages were expanded even further by Republican President George H. W. Bush when he signed the Energy Policy Act into law in 1992. It was a Republican senator, Chuck Grassley of Iowa, who sponsored the legislation that created the original PTC in the 1990s. His website even dubs him the “father of the first-ever wind energy production tax credit.”²

When the solar ITC credits were scheduled to phase out, from 30% in 2019 to 10% by 2022, a bill passed under the Trump administration extended the 26% ITC through 2022.³ This demonstrates that even during conservative leadership—and, specifically, a Trump presidency—renewable energy incentives have received support, highlighting that the continued expansion of renewables is not purely a partisan issue. Since then, the Inflation Reduction Act (IRA) has expanded and extended the solar ITC further, to 30% through 2032.

Today, many Republican lawmakers, especially those from states benefiting from increasing clean energy investments, continue to support clean energy incentives. Support from Grassley and other like-minded Republicans in Congress, including Utah Senator Mitt Romney⁴ and Maine Senator Susan Collins,⁵ bolsters the likely continuation of bipartisan backing for clean energy.

“Even during conservative leadership—and, specifically, a Trump presidency—renewable energy incentives have received support, highlighting that the continued expansion of renewables is not purely a partisan issue.”



Legislative, political, and economic realities make repeal of the IRA unlikely

The energy transition is driving job creation and economic growth, regardless of party affiliation.

The IRA, signed into law in 2022, provides a suite of tax incentives and rebates that encourage energy transition development and investment. Because the IRA is a piece of legislation, it cannot be unilaterally undone by a sitting president. Repealing or significantly altering the IRA would require a concerted effort by both the House and Senate, a scenario that is unlikely given current political dynamics. Even if the White House shifts leadership, a strong majority would be needed in Congress to overturn the IRA. The passage of the IRA itself was shaped by just a handful of key senators, and similar dynamics (i.e., just a few defectors from the party line) would likely block any efforts to reverse the incentives it provides. As recently as August 2024, 18 House Republicans wrote to Speaker Mike Johnson asking him not to axe clean energy tax credits in the IRA.⁶

Moreover, the majority of clean energy investments since the IRA’s passage have flowed into red states⁷ and districts.⁸ Based on clean energy projects announced between August 2022 and August 2024, it is conservatively estimated that the IRA is driving \$126 billion in energy transition investment, almost two-thirds of which is in states that voted for Donald Trump in 2020.⁹ As seen in *Display 1*, this represents \$77

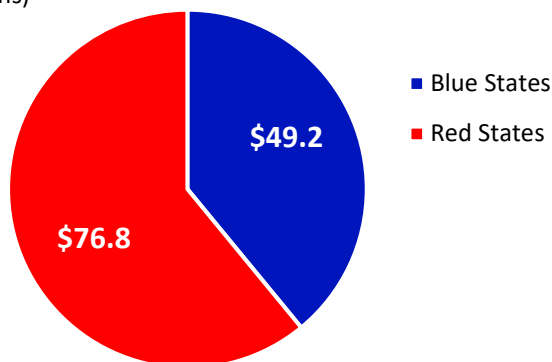
billion of new capital into red states, compared with \$49 billion into blue states.¹⁰ At the congressional district level, that trend is even more apparent, with \$107 billion into Republican-led districts and \$16 billion into Democrat-led districts.

A number of red states have also become manufacturing hubs for renewable energy components, benefiting from the reshoring of solar panel and battery component manufacturing. In South Carolina, a \$3.5 billion battery recycling plant broke ground in early 2024, bringing with it an expected 1,500 new jobs.¹¹ The company building the facility specifically cited the IRA as a determining factor in deciding to build. In 2023, Canadian Solar announced plans to build a solar cell plant in Indiana and a solar module plant in Texas, the latter of which began operation in late 2023.¹² Georgia, a state led by a Republican governor, is home to the first solar panel factory built in the US after the passage of the IRA.¹³

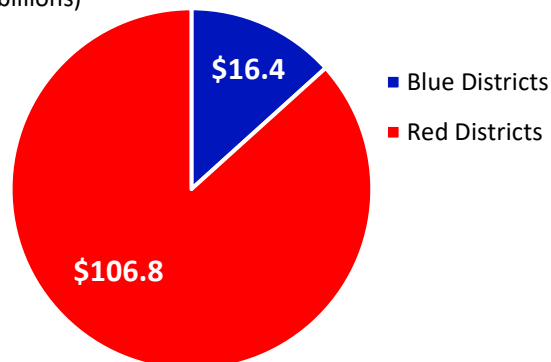
Given the growing economic impact of these industries, we believe there are strong mitigants to a Republican presidency rolling back either the ITC or PTC tax benefits. As Wood Mackenzie and other industry analysts have noted,¹⁴ these credits are unlikely to disappear—the political cost would be too high.

Display 1: The majority of clean energy investments since the IRA are flowing into red states and Republican-led congressional districts

Estimated Clean Energy Investments by State (in \$ billions)



Estimated Clean Energy Investments by District (in \$ billions)



Source for state- and district-level data: “E2 Clean Economy Works: Inflation Reduction Act Two-Year Analysis,” August 2024. Red states are defined as states that voted for Donald Trump in the 2020 election, and blue states are those that voted for Joe Biden in the 2020 election. Total state-level investment differs slightly from total district-level investment due to certain project announcements not including specific locations within a state; investments related to these projects could not be attributed to specific congressional districts.



Renewable energy and the IRA are driving green jobs in red states and districts

For many regions, transitioning to clean energy is not only an environmental benefit but an economic necessity. While fossil fuel industries like coal currently employ around 70,000 people nationwide, renewable energy generation supports over 550,000 jobs, particularly in red states and districts.¹⁵ (In fact, the fastest-growing job in the country today is wind turbine service technician.)¹⁶

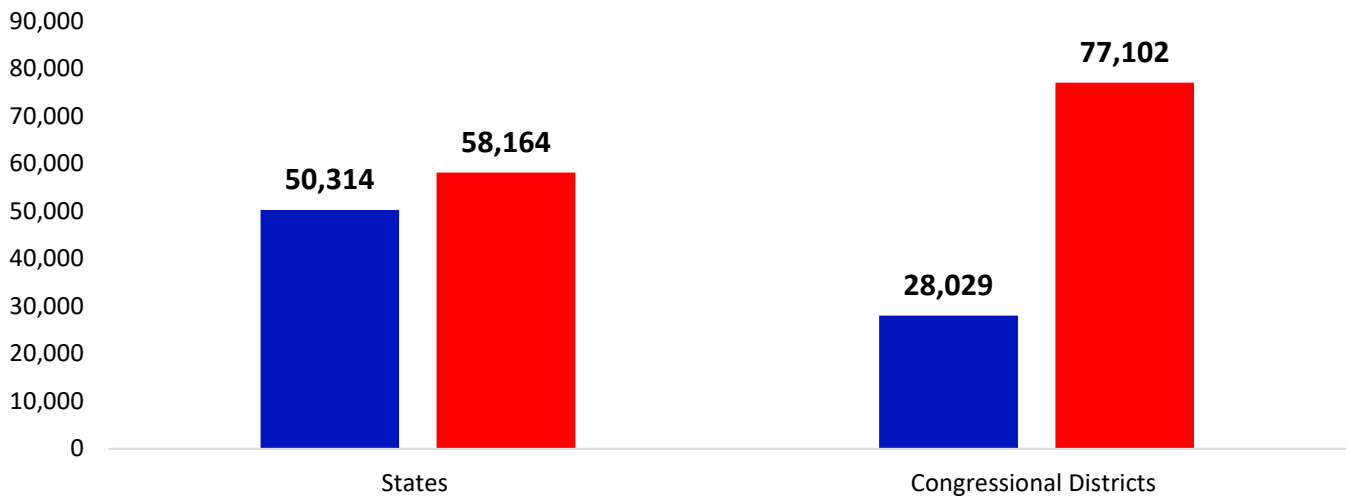
In Texas, for example, renewable energy is seen as a profitable business opportunity with attractive economics, rather than as an industry driven by environmental concerns.¹⁷ Additionally, the state is home to more wind energy jobs than any other in the country (over 27,000), as well as the third most solar industry jobs (nearly 17,000).¹⁸ As the state continues to lead in wind energy production and rapidly grows its solar capacity, it’s clear that clean energy is becoming central to its economic future.

It’s estimated that over 108,000 new US clean energy jobs—the overwhelming majority of which are permanent, long-term jobs—either have been or are expected to be created by the IRA-related projects announced in the last two years alone.¹⁹ As *Display 2* shows, well over half of that total will be in red states. Again, the congressional district level shows an even wider divergence, with more than 71%—or 77,000—of these jobs located in red districts, compared with 28,000 in blue districts.

Even if political rhetoric turns against renewable energy in some parts of the country, the growing number of jobs and the practical realities on the ground would make it difficult for politicians to reverse course.

Display 2: The IRA is creating more green energy jobs in red areas than in blue areas

Estimated green jobs created by IRA across states & congressional districts



Source for state- and district-level data: “E2 Clean Economy Works: Inflation Reduction Act Two-Year Analysis,” August 2024. Red states are defined as states that voted for Donald Trump in the 2020 election, and blue states are those that voted for Joe Biden in the 2020 election. Total state-level job numbers differ slightly from total district-level job numbers due to certain project announcements not including specific locations within a state; jobs related to these projects could not be attributed to specific congressional districts.



Significant state-level support for renewables

While federal initiatives like the IRA play an important role in driving the energy transition, state governments have been equally, if not more, influential in shaping the renewable energy landscape. In particular, many states have created Renewable Portfolio Standards (RPS) which mandate that a certain percentage of electricity generation must come from renewable sources by a specific date.

These state-level requirements, adopted by 29 states and Washington, DC, have significantly accelerated the development of renewable energy projects across the US, contributing to nearly half of all renewables growth since 2000.²⁰

Aside from being effective drivers of renewables growth, RPS have also proven to be resilient

across political cycles. Although most were adopted two decades or longer ago, many states continue to revise them upward. Additionally, over that timeframe, 16 states have also adopted separate, broader 100% clean electricity standards (CES).²¹

This illustrates how clean energy incentives are not solely dependent on federal support; state governments have shown that they are willing to push forward with clean energy initiatives, regardless of the federal political climate. If federal tax credits or incentives were to be reduced, states would likely step in to fill the gap, ensuring that the momentum behind renewable energy projects continues.

Precedent, safe harboring, and market forces provide additional stability

The US has no historical precedent for rolling back legislation and requiring backpay for taxes previously offset. Hypothetically, if such a scenario were to occur, it would likely create chaos in the US financial system, affecting major banks that have made significant investments in renewable energy projects. JP MorganChase and Bank of America, for example, have invested hundreds of billions of dollars in clean energy to date and are each targeting \$1 trillion²² of clean energy investment by 2030.²³

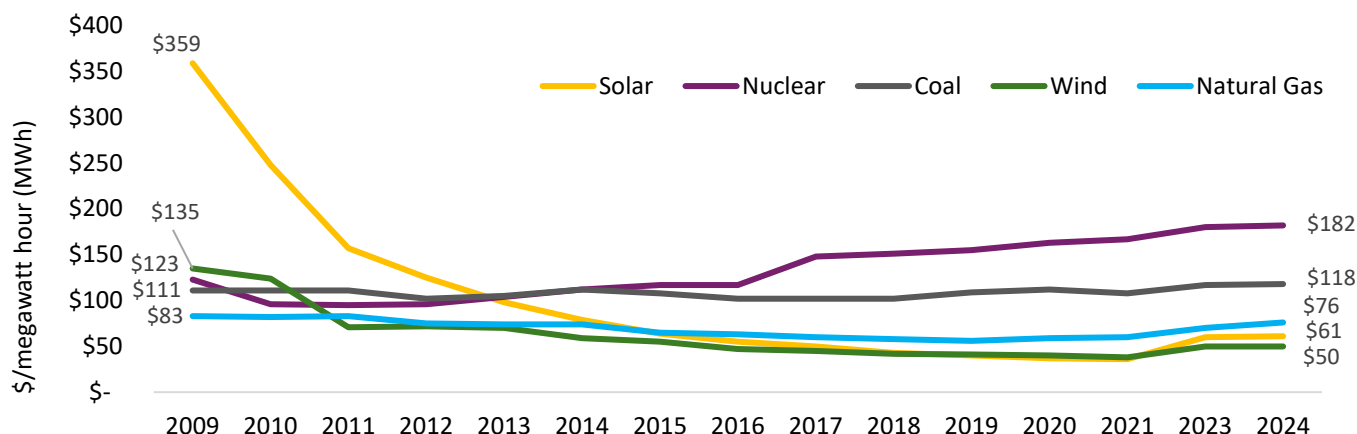
Many of Greenbacker's operational assets have already secured their tax credits. However, for renewable energy projects that have not yet been constructed—both at Greenbacker and across the industry—there are safe-harboring provisions that allow for the preservation of tax credits, even if changes to the ITC or PTC were to

occur. Such provisions exist to allow renewable energy developers and investors to continue operating with a degree of certainty, even in the event that tax credits were to be phased out over time.

Beyond the legislative and financial stability offered by the ITC and PTC programs, renewable energy growth is increasingly driven by market forces. *Display 3* illustrates how wind and solar energy have become some of the most cost-effective forms of electricity generation,²⁴ outcompeting fossil fuels in many parts of the country, net of subsidies across all power generation sources. As technology continues to become more efficient, we believe the cost of renewable energy will continue to decrease, further incentivizing investment, development, and deployment across the sector.



Display 3: Renewable energy is more cost-effective than traditional energy sources



Source: Lazard Levelized Cost of Energy Analysis, June 2024.

The bigger picture: global investment and climate needs

The clean energy transition in the US cannot be viewed in isolation. Globally, the need for renewable energy investment is immense. Bloomberg New Energy Finance (BNEF) estimates that achieving net-zero emissions by 2050 will require approximately \$5 trillion in annual investment between 2024 and 2030. However, only \$2 trillion was invested last year, highlighting the need for significantly more capital to meet global climate goals.²⁵

This gap in investment underscores the importance of continued support for renewable energy, regardless of political leadership. The risks of climate change are becoming increasingly apparent, from rising insurance premiums in areas like Texas to the broader economic impacts of an ever-growing number of extreme weather events. As these risks grow, so too does the demand for clean energy solutions. The energy transition is not just an environmental necessity but an economic imperative that will drive long-term growth and stability of renewable energy.

Green energy growth is independent of the White House

For the reasons highlighted above, investors can feel confident that the energy transition is largely resilient to political cycles. Although the 2024 US presidential election will undoubtedly shape political discourse, we do not believe it will have a profound impact on the trajectory of energy

transition investment. The legislative strength of the IRA, the economic benefits to red states, and the practical realities of renewable energy growth all suggest that the clean energy sector will continue to thrive, regardless of who sits in the White House.

Greenbacker Renewable Energy Company ("Greenbacker") is an independent power producer and energy transition-focused investment manager. Its Greenbacker Capital Management business segment serves as the investment manager to four energy-transition focused strategies.

The information presented herein may involve Greenbacker’s views, estimates, assumptions, facts, and information from other sources that are believed to be accurate and reliable and are, as of the date this information is presented, subject to change without notice. This is not an offer or solicitation to buy or sell any security, nor is it a recommendation that you purchase, sell or hold any security or other investment, or that you pursue any investment style or strategy. No information herein is intended to be, nor should you consider to be, investment, accounting, tax, or legal advice.



Sources:

- 1 [Carter Proposes \\$100 Million Solar Energy Bank](#), *The Washington Post*, Edward Walsh, June 21, 1979.
- 2 [Grassley Helps Win Senate Passage Of Uncapped Wind Energy Tax Credit](#), April 2008.
- 3 [New COVID-19 Relief Legislation Extends Renewable Energy and Green Technology Industry Tax Incentives](#), December 2020.
- 4 [Clean Air, Energy & Water - Mitt Romney \(senate.gov\)](#), *romney.senate.gov*.
- 5 [Governor Mills, Senators Collins & King, and Congresswoman Pingree Announce Nearly \\$150 Million Federal Grant to Develop World's Largest Multi-Day Energy Storage Facility in Lincoln, Maine](#), *investors.maine.gov*, August 2024.
- 6 [18 House Republicans ask Mike Johnson not to target IRA clean energy tax credits](#), *The Hill*, Zack Budryk, August 2024.
- 7 In this piece, red states are defined as states that voted for Donald Trump in the 2020 election and blue states are defined as states that voted for Joe Biden in the 2020 election; [2020 Presidential Election Results](#), *The New York Times*.
- 8 [Two Years In, The IRA Has Benefitted GOP Districts & Red States The Most](#), *CleanTechnica*, Derek Markham, August 2024.
- 9 [Clean Economy Works IRA Two Year Review August 2024.pdf](#), *E2*, August 2024.
- 10 [Clean Economy Works IRA Two Year Review August 2024.pdf](#), *E2*, August 2024.
- 11 [Red states are big winners of Biden's landmark laws | CNN Business](#), *CNN*, Matt Egan, February 2024.
- 12 [This solar giant is moving manufacturing back to the US](#), *MIT Technology Review*, Zeyi Yang, April 2024.
- 13 [The Manufacturing Of Solar Panels In The US Is Soaring Thanks To IRA Policies](#), *CleanTechnica*, September 2024.
- 14 [Assessing the risks to US renewables](#), *Wood Mackenzie*, Ed Crooks, September 17, 2024.
- 15 [Clean Jobs America 2024](#), *E2*, September 17, 2024.
- 16 [The 15 Jobs That Are Expected to Grow the Fastest Over a Decade](#), *Business Insider*, Madison Hoff, August 29, 2024.
- 17 [U.S. State Renewables Portfolio & Clean Electricity Standards: 2024 Status](#), *Berkeley Lab*, August 2024.
- 18 [Clean Jobs America 2024](#), *E2*, September 17, 2024.
- 19 [Clean Economy Works IRA Two Year Review August 2024.pdf](#), *E2*, August 2024.
- 20 [U.S. State Renewables Portfolio & Clean Electricity Standards: 2024 Status](#), *Berkeley Lab*, August 2024.
- 21 [U.S. State Renewables Portfolio & Clean Electricity Standards: 2024 Status](#), *Berkeley Lab*, August 2024.
- 22 [Clean energy is a massive investment opportunity](#), *JPMorganChase*, February 2023.
- 23 [Bank of America Increases Environmental Business Initiative Target to \\$1 Trillion by 2030](#), *Bank of America*, April 2021.
- 24 [Levelized Cost of Energy Analysis](#), *Lazard*, June 2024.
- 25 [Energy Transition Investment Trends 2024](#), *BloombergNEF*, January 2024.