

Policy, Politics & Portfolios

ENERGY POLICY AND PORTFOLIOS

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The Inflation Reduction Act’s climate change provisions and the investor 2

What do the new climate-change provisions of the Inflation Reduction Act (IRA) mean for the industry and investors?

Renewables and the U.S. energy landscape 4

Reducing dependence on fossil fuels is a priority of the Biden administration. The Inflation Reduction Act includes provisions that bolster President Biden’s pledge to renewable energy, but the shift is more of a marathon than a sprint.

Refining capacity headwinds..... 6

The Biden administration is asking oil companies to produce more oil and refiners to distill more end-user product in an effort to knock down energy prices. The concept seems simple: produce more supply relative to demand and prices are likely to fall. But the reality is more complicated.

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The Inflation Reduction Act’s climate change provisions and the investor

High energy

Environmental policy has morphed in the past month from a presidential near-declaration of a national climate emergency to a climate-oriented Inflation Reduction Act (IRA) legislated by Congress. A contradiction facing fossil fuels between immediate geopolitical and economic needs for increased output and environmental demands to contain it is apparent from IRA's higher oil fees and royalties alongside increased tax credits for carbon capture and potential increases in federal oil and gas lease sales.¹

Climate change and renewable energy at center-stage

The real focus of IRA’s energy provisions is on climate-change mitigation through renewable-energy incentives totaling a record \$369 billion of IRA’s total \$433 billion in spending over the next decade. Highlights of IRA’s climate-change provisions are as follows:

Table 1. Highlights of the Inflation Reduction Act’s \$369 billion in energy- and-climate-related spending

Lower energy costs	<ul style="list-style-type: none"> • \$10 billion in consumer home-energy tax credits and rebates • \$4,000 and \$7,500 consumer tax credit for lower- and middle-income purchase of used or new electric vehicles, respectively
Increased energy security	<ul style="list-style-type: none"> • \$60 billion of production tax and other incentives to accelerate U.S. clean-energy manufacturing • \$2 billion in grants to retool existing auto manufacturing facilities for clean vehicles • \$2 billion for National Labs to accelerate breakthrough energy research
De-carbonization	<ul style="list-style-type: none"> • Tax credits and \$30 billion in grant and loan programs for clean-energy transition by states and utilities • Tax credits and grants for clean fuels and clean commercial vehicles and to reduce industrial emissions • \$9 billion+ for federal procurement of U.S.-made clean technologies • A \$27 billion “green bank” for renewables-related projects • Methane Emissions Reduction Program
Disadvantaged communities	<ul style="list-style-type: none"> • \$6 billion for environmental, climate, and neighborhood grants • \$1 billion for clean heavy-duty vehicles, including school and transit buses and garbage trucks
Rural communities	<ul style="list-style-type: none"> • \$20 billion+ for climate-smart agriculture practices • \$5 billion in grants for fire-resilient forests, conservation, and urban tree planting • Tax credits and grants for U.S. biofuels production and infrastructure • \$2.6 billion in grants to conserve and restore coastal habitats

Sources: Congressional Budget Office, United States Senate, and Wells Fargo Investment Institute. Data as of August 12, 2022.

The bill’s three broad goals are to a) speed transition from fossil fuels to renewables, nuclear power and other low-carbon emissions, b) accelerate renewables equipment reshoring to the U.S., and c) distribute renewables tax incentives and funding broadly across production, intermediate and final

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IRA’s climate-related provisions are viewed by the Rhodium Group as adding another 7%-9% to the 24%-35% reduction of greenhouse gases expected between 2005 and 2030 without the bill.

Source: “Inflation Reduction Act Summary: Energy and Climate Provisions,” Bipartisan Policy Center, August 4, 2022. The Rhodium Group provides research, data and analytics to public and private entities on global topics including China’s economic development to climate change.

Electric-vehicle (EV) tax credits could reduce 50%-100% of the cost advantage of a new fossil-fuel car and 75% of the cost disadvantage of producing clean hydrogen vs. natural gas.

Source: Wells Fargo Equity Research, “Pedal to the Metal — Proposed IRA bill to Accelerate Clean Energy Transition,” August 3, 2022, p.4.

1. “Manchin Spending Deal Includes Billions of Taxes on the Oil Sector,” Bloomberg, August 1, 2022.
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users among households and businesses.

The stakes are high: the Rhodium Group estimates that greenhouse gas emissions will decline 31%-44% between 2005 and 2030 from the added spending, compared to a projected 24%-35% without the bill.² The plan's effectiveness hinges on the decade-long life of the incentives and their focus on energy storage and economically viable production of clean hydrogen. For example, tax credits could offset 50%-100% of the current cost advantage of a new gasoline- or diesel-powered car over an electric vehicles (EVs),³ and eliminate 60%-75% of the current cost disadvantage in producing clean hydrogen vs. natural-gas production costs.⁴ Effective incentives dealing with the intermittency problem of solar and wind generation aim to boost hydrogen output, nuclear power, and stand-alone storage.

What it means for the economy and investors

The climate bill's economic impact will be most noticeable in a) \$28,500 per household incentives to buy EVs, solar equipment, and household appliances, b) the \$1,800 in annual household savings for gasoline and utility costs through electrification,⁵ and c) the estimated 1.5 million jobs created by 2030 in construction manufacturing and services.⁶

Achieving added long-term emissions reductions by 2030 ultimately could be a step toward realizing added savings by reducing the growing number and importance of climate-related natural disasters. For investors, support for commodities and capital goods make the Industrials sector among IRA's potential climate-related beneficiaries. Renewable-energy incentives dovetail with a recent increase in our strategic allocation to commodities, supported, we believe, by a secular super-cycle⁷ underpinning raw materials prices. Exposure to increased renewables investment extends beyond cobalt, lithium, rare earths, and tellurium to more traditional copper, nickel, silver, and steel. The challenge for some commodity producers will be to ramp up domestic output to meet mandated minimums for downstream incentives, notably on EVs.

Added Industrials support comes from the IRA's impact on Capital Goods. We anticipate renewables' grid investments will support electrical equipment directly and through increased utilities' investment. Equipment suppliers to producers of EVs, batteries, charging stations, and other infrastructure are other potential beneficiaries, as are producers of heat pumps and other building products supporting conversion to green, more energy-efficient buildings. And construction, truck, and agricultural industries are set to benefit from increased purchases of commercial EVs and manufacturing production incentives.

Key takeaways

- Government energy policy, a centerpiece of the Inflation Reduction Act, incentivizes clean-energy output as the nation's main power source in the coming decade while taking a more ambivalent view of fossil-fuel production.
- The greater economic impact of IRA's climate-related spending is through its indirect effect on household savings and increased jobs and in heading off climate change's more damaging natural disasters and other disruptions.
- We view the longer-term, strategic opportunities created by the IRA's climate-change legislation as broadening and reinforcing our favorable rating for Energy and our current neutral rating for Utilities.

2. "Inflation Reduction Act Summary: Energy and Climate Provisions," Bipartisan Policy Center, August 4, 2022. The Rhodium Group provides research, data and analytics to public and private entities on global topics including China's economic development to climate change.

3. Wells Fargo Equity Research, "Pedal to the Metal — Proposed IRA bill to Accelerate Clean Energy Transition," August 3, 2022, p.4.

4. "A Bridge for Energy Supply: Liquefied Natural Gas (LNG)," Global Securities Research, Wells Fargo, June 30, 2022.

5. "Five Major Benefits of the Inflation Reduction Act's Climate Investments," Center for American Progress, August 4, 2022.

6. "Modeling the Inflation Reduction Act Using the Energy Policy Simulator," Energy Innovation, August 2022.

7. Super-cycle: Individual commodity prices tend to move together, over very long bull and bear cycles, often lasting a decade or more.

Renewables and the U.S. energy landscape

A marathon, not a sprint

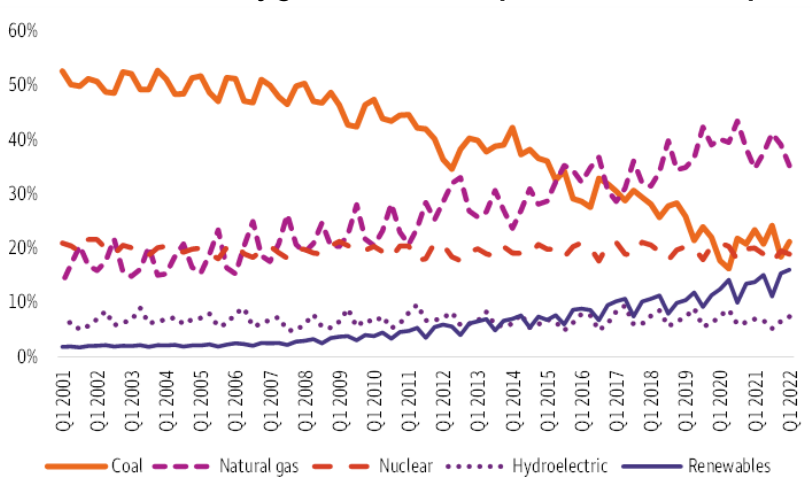
Although fossil fuels still compose over 50% of U.S. electricity generation, renewables are gradually gaining share.⁸ The White House has expressed commitment to renewable energy and mobilized policy actions to support that endeavor. Most recently, the Inflation Reduction Act (IRA) of 2022 legislation includes provisions that bolster President Biden’s pledge to renewable energy.

While clean energy may be the future, replacing fossil fuels as an energy source will not be an easy task. Looking ahead, we anticipate investors and consumers should expect continued penetration of clean-energy technology but should also recognize the shift is a marathon, not a sprint. We believe there are opportunities for investors as the clean-energy evolution advances.

Renewables and the electric grid

Fossil fuels dominate the U.S. energy landscape. Much of that energy is used to generate electricity. Today, U.S. electricity is produced from several sources, including natural gas, nuclear, coal, and renewables (see chart). Over the past two decades, renewables’ share of the U.S. generation stack has grown significantly from a relatively negligible level to 15% today. This growth has come at the expense of coal, clear evidence of a preference for lower-emission fuel sources.

Chart 1. U.S. electricity generation (first-quarter 2001 – first-quarter 2022)



Sources: U.S. Energy Information Administration (EIA), Wells Fargo Advisors. Quarterly data 2001 through March 2022. Note: Renewables reflect wind and solar.

Fossil-fuel consumption releases greenhouse gases into the atmosphere, diminishing air quality, and is widely believed to contribute to rising global temperatures. Renewable generation of electricity is “clean” in that it does not produce emissions — which can help benefit air quality and potentially slowing the trend of rising temperatures. Beyond increasing deployment of renewables, full “de-carbonization” of the electrical grid will also require long-

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Renewables include not only wind and solar but also mature technologies of hydroelectric, biomass, and geothermal.

A recent Pew Research Center poll found that 69% of U.S. adults are in favor of taking steps to become carbon neutral by 2050.

Sources: “Earth Day 2022: Americans’ Views of Climate Change, Renewable Energy,” Pew Research Center, April 22, 2022.

8. Energy Information Administration, through Q1, 2022.
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duration energy storage, technology that is still developing and likely years away. Going forward, we expect continued investment in renewable generation, particularly wind and solar, as well as storage technology. At the same time, however, we expect natural gas, coal, and nuclear power to remain prominent components of the U.S.'s electricity portfolio.

Politics of clean energy

Reducing the nation's carbon footprint and dependence on fossil fuels are priorities for the White House. During his first weeks in office, President Biden halted completion of a major pipeline, rejoined the Paris climate accord, and suspended oil and gas permitting on federal jurisdictions. In November 2021, he attended the UN Climate Change Conference (COP26) and joined global leaders in signing the Glasgow Pact, which aims to achieve global carbon neutrality by 2050.

Certain energy-related provisions of the IRA are likely to buttress the shift to renewables. For example, the legislation includes extended tax incentives for new solar and wind generation and, for the first time, stand-alone incentives for storage. Under the broader clean-energy umbrella, the legislation would also provide direct consumer incentives, including rebates and tax credits to purchase energy-efficient appliances and vehicles and to invest in home-energy efficiency as well as incentives for U.S. clean-energy manufacturing.

As the clean-energy transition advances, Washington must not overlook lessons learned from Europe, which is further along the process and currently struggling to meet energy demands. In our view, that lesson includes a diversified, all-of-the-above approach to electric generation and increased self-reliance. Germany, for example, has experienced energy shortages due to aggressive emission goals, over-reliance on natural gas as a fuel source, and the war in Ukraine.

Economic and investment implications

Renewable generation has been an investment focus and growth opportunity for the Utilities sector over the past decade. Growth has been driven by advances in renewable technology, investment incentives, and environmental considerations from consumers, legislators, and regulators. We expect these trends to continue to offer long-term potential investment opportunities in Utilities. Wells Fargo Investment Institute (WFII) currently holds a Neutral view on Utilities over a tactical horizon (the next six -18 months). In our view, defensive characteristics supporting the sector will likely be offset by higher interest rates, elevated debt levels, limited pricing power, and valuations.

WFII is tactically favorable on Energy due to attractive valuations compared to historical levels. The sector faces secular challenges from the shift to clean energy but could also see some opportunities while limited oil production struggles to keep pace with global demand growth. Over a multi-year horizon, U.S. integrated oil majors could see reduced competition for developing fossil-fuel assets as well as incremental demand for liquefied natural gas. These companies are also investing in areas like hydrogen, carbon capture, and alternative fuels to adapt as the energy transition proceeds.

Key takeaways

- Fossil fuels compose over half of U.S. electricity generation, but renewables are gaining share.
- Reducing the nation's carbon footprint and dependence on fossil fuels are priorities for the White House.
- Renewable generation should remain an investment and growth opportunity for the Utilities sector. In Energy, integrated oil majors have the greatest potential in renewables.

Refining capacity headwinds

Not much to spare

Energy prices have been on the rise since the second quarter of 2020 after taking a brief but severe tumble in the early months of the pandemic. As the economy attempted to stabilize and recover, oil rallied to trade over \$125 per barrel at one point in March of this year. More recently, the national average price for a gallon of gasoline rose to just over \$5, an all-time high, before backing off over the last month or so.

While energy prices were on the rise well before the Russian invasion of Ukraine last February, geopolitical tensions have helped to further push energy prices higher as supplies relative to demand have tightened. Sanctions aimed at limiting Russia’s ability to sell oil and crude distillates further disrupted the supply/demand imbalance just as gasoline, diesel fuel, and jet fuel saw increased demand as U.S. and global economies began to recover.

Consumers in the U.S. have seen more of their incomes go toward filling up their vehicle’s fuel tank every week. Travelers have taken notice of meaningfully higher airfares and crowded planes as people go on more business trips and vacations. Higher prices have started to cool demand for products and services tied to the price of energy.

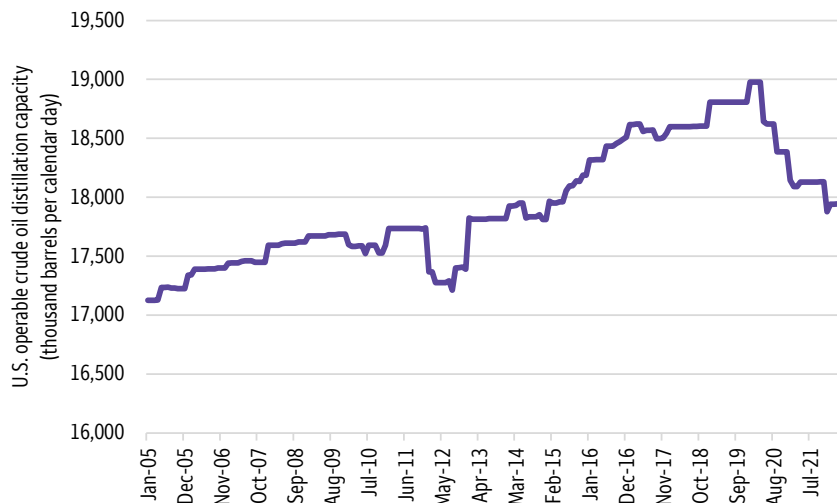
The Biden administration is asking oil companies to produce more oil and refiners to distill more end-user product in an effort to knock down energy prices. The concept seems simple: produce more supply relative to demand and prices are likely to fall. But the reality is more complicated. Let’s look at this issue from the refiner’s point of view.

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The last refinery built with what the Energy Information Agency (EIA) considers “significant downstream unit capacity” came online in 1977. U.S. refinery capacity decreased during 2021 for the second consecutive year.

Sources: EIA FAQs and EIA “Today in Energy,” June 29, 2002

Chart 2. U.S. operable crude-oil distillation capacity



Sources: U.S. Energy Information Administration, Wells Fargo Investment Institute, as of August 11, 2022.

As the U.S. Energy Information Administration (EIA) points out, U.S. refinery capacity decreased during 2021 for the second consecutive year (Chart 2). Operable crude oil distillation capacity totaled 17.9 million barrels per calendar day (BPD) as of January 1, 2022, down from a distillation capacity of © 2022 Wells Fargo Investment Institute. All rights reserved.

18.1 million BPD on January 1, 2021, and 19 million BPD at the beginning of 2020. This has occurred while the demand for gasoline, diesel, and jet fuel has increased and U.S. exports of distillate products to Europe have jumped higher as prices “across the pond” rose relative to the U.S. as less Russian product reached the Continent.

Ideally, as with most other products, producers look for ways to increase capacity and therefore boost profits as demand increases. But there is the refining rub. According to EIA data, U.S. refiners are operating at approximately 94% of total capacity. Given that refineries are frequently shut down for short periods of time for regular maintenance and occasional unscheduled repairs, there is not much unused capacity to boost production by any noticeable amount.

That begs the question, “Why don’t we just build more refineries?” Once again, let’s rely on EIA data for perspective. The EIA tells us that as of the start of 2022 there were 130 operable petroleum refineries in the United States. The newest refinery, located in Texas, came online at the beginning of the year and produces just 45,000 BPD. But the last refinery built with what the EIA considers “significant downstream unit capacity” came online in 1977 with 585,000 BPD. That is not a misprint, the last major refinery in the U.S. was built 45 years ago. There has, however, been some incremental additional capacity added at a couple of other refineries over the last 10 years. But still, given the growth of the domestic economy in recent decades and the growth in demand for distillates over the same time frame, one can argue refining capacity is well below what many would consider adequate levels.

Government permitting processes for refining expansion or the building of new facilities are stringent and can take many years. Of course, the building of new facilities also suffers from the “not in my backyard” mentality as communities would prefer that new refineries be built in other locations. The push for energy sources that are not fossil fuels also creates headwinds as proponents of greener alternatives fight to prevent additional refining capacity from being built. And finally, refining companies are looking at the cost of building new production facilities and the decades it can take to generate an acceptable return on their investment and trying to determine, quite literally, how long their industry may exist.

From a portfolio standpoint, we currently carry a favorable tactical rating on the Energy sector over the coming 6-18 months. The shortage of refinery capacity contributes to our tactical favorable rating by limiting the supply of distillates. When summer driving or business and vacation travel demand increase, prices are likely to increase without drawing out any new supply from producers. From a longer-term perspective, Energy will continue to play a large role in powering the growth of the economy looking ahead. The fact is, renewables are unable to replace fossil fuels any time soon, meaning that limited supplies over a multi-year horizon are likely to create favorable conditions if demand continues to increase as we expect. Investment in both traditional energy and alternative-energy companies will be necessary as the transition to a carbon-free or near carbon-free economy will likely take decades.

Key takeaways

- Ideally, as with most other products, producers look for ways to increase capacity and therefore boost profits as demand increases. But there is the refining rub. According to EIA data, U.S. refiners are operating at approximately 94% of total capacity.
- The push for energy sources that are not fossil fuels also creates headwinds as proponents of greener alternatives fight to prevent additional refining capacity from being built.

Risk considerations

Different investments offer different levels of potential return and market risk. The level of risk associated with a particular investment or asset class generally correlates with the level of return the investment or asset class might achieve. **Equity securities** are subject to market risk which means their value may fluctuate in response to general economic and market conditions and the perception of individual issuers. Investments in equity securities are generally more volatile than other types of securities. Investments that are concentrated in a specific sector or industry may be subject to a higher degree of market risk than investments that are more diversified.

Concentration in the energy sector and in industries may present more risks than if a portfolio were broadly diversified over numerous sectors of the economy. A downturn in the energy sector of the economy, adverse political, legislative or regulatory developments or other events could have a larger impact on a portfolio that concentrates in the sector.

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