

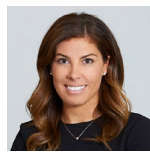
# ClearBridge

## Investments

## ESG Investment



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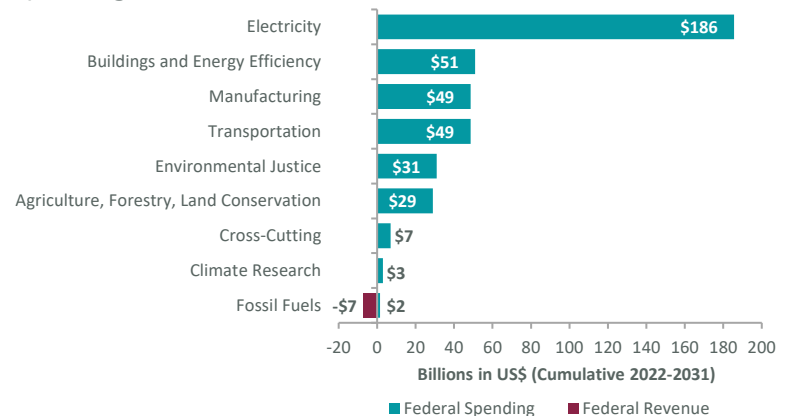
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### Key Takeaways

- ▶ The U.S. Inflation Reduction Act offers strong tailwinds for ClearBridge holdings in the renewable energy and electric vehicle supply chains, as well as companies helping the climate with solutions in buildings and energy efficiency.
- ▶ The act turbocharges renewable energy deployment, jumpstarts emerging technologies like battery storage, clean hydrogen and carbon capture and storage, and incentivises U.S. manufacturing, while highlighting fair wages and the responsible production of minerals necessary for the energy transition.
- ▶ Households can receive tax credits for home construction projects that boost energy efficiency such as adding a heat pump, an energy-efficient alternative to furnaces and air conditioners that uses outside air to both heat a home in the winter and cool it in the summer.

The U.S. Inflation Reduction Act (IRA), signed into law on August 16, 2022, is the most significant climate legislation in U.S. history and should have ramifications for companies across several sectors. Most of the act consists of spending or tax credits for energy and climate — worth around US\$390 billion over 10+ years, with the largest portion going to clean energy production and investment (Exhibit 1). It also offers strong tailwinds for ClearBridge holdings in the renewable energy and electric vehicle (EV) supply chains, as well as those that are helping the climate with solutions in buildings and energy efficiency.

Exhibit 1: Inflation Reduction Act Energy and Climate Spending



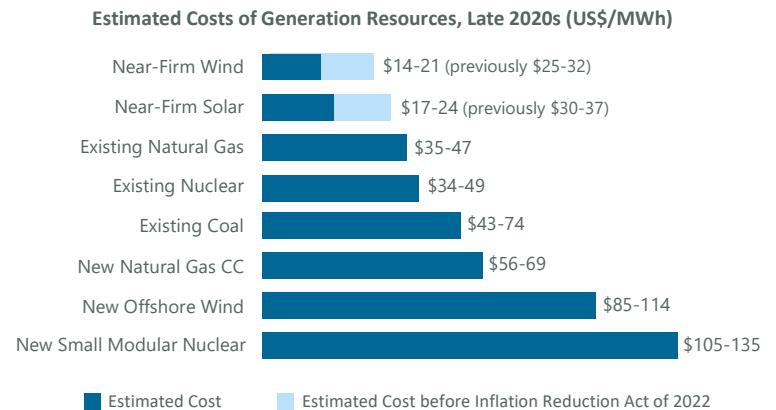
Source: ClearBridge Investments, Congressional Research Service.

At a high level, the act includes US\$127 billion for extending and expanding production tax credits (PTC) and investment tax credits (ITC) for zero-carbon electricity generating technologies like solar, wind, biomass and geothermal. PTC include credits of US\$26/MWh (inflation-linked) for producing zero-carbon electricity for the first 10 years of a project’s life. ITC provide an upfront tax credit equal to 30% of construction costs that the developer can claim immediately to offset the cost of building the plant.

These tax credits will phase out beginning the later of 2032 or when the U.S. power sector emits 75% less carbon than 2022 levels — meaning the credits could remain in place well beyond 2032. This long-term visibility is a significant positive for the sector.

The tax credits have also been expanded to include standalone energy storage, a huge boost for this technology that should lead to significant increases in battery installations. Wind and solar were already highly competitive relative to other sources of electricity generation, and the extension of the ITC and PTC should turbocharge those economics (Exhibit 2).

Exhibit 2: IRA Turbocharges Wind and Solar Cost Competitiveness



Shown for illustrative purposes only. Note: Natural gas, nuclear, coal and natural gas CC estimated costs were unchanged. Source: NextEra Energy.

The PTC and ITC now come with an extra 10% bonus credit if domestic content thresholds are met for manufactured components in the project (generally 40% of the total cost for most projects, 20% for offshore wind, must be produced in the U.S.), which will help U.S. manufacturers.

**ClearBridge Holdings Leading Decarbonisation Drive**

ClearBridge portfolio companies have been adding value with innovation and competitive business models in these areas for years and are well-positioned to benefit from the credits. Shoals Technologies, for example, which manufactures electrical balance of systems (EBOS) components for ground-mounted solar projects, has been gaining market share for quality of service and value in delivering labor savings, and is

developing products that will make utility scale projects more efficient. Its main factory in Tennessee also employs a very diverse workforce.

Also with a strong presence in the U.S., Enphase Energy designs and manufactures microinverters for residential and small commercial solar photovoltaic systems and has made strides in evolving from a solar inverter maker into a “home energy management” company that can act as the brains for the home’s energy system, including microinverters for solar, as well as storage and energy management software. Enphase has been capitalising on growth in residential solar demand in the U.S. and capturing market share in Europe.

The PTC and ITC extensions are also positive for utilities with renewables portfolios, improving long-term visibility for their efforts to decarbonise their power mixes. NextEra Energy is exemplary in leading utilities in decarbonisation through both of its subsidiaries. The company’s regulated utility in Florida, Florida Power & Light, will be able to broaden its already aggressive solar capacity buildout targets in the state. The company’s unregulated subsidiary NextEra Energy Resources, one of the largest renewable project developers in North America, should see higher demand for solar, wind and batteries going forward on more attractive subsidised economics of renewable power. NextEra also has a “real zero” strategy to eliminate carbon emission from its operations, a topic ClearBridge actively engaged the company on after it formally announced targets for Scope 1 and 2 emissions reductions in its operations and purchased power and without using offsets. The plan has five-year milestone targets, e.g., a 70% reduction in emissions by 2025. NextEra Energy Partners, a growth-oriented and renewables-focused subsidiary of NextEra Energy, is even more levered to the increasing spending on and demand for renewable energy the IRA should drive.

The credits also broadly offer new opportunities for investments in storage, EV charging infrastructure, [hydrogen](#) and [carbon capture and storage](#), the latter two topics we have written about as having the ability to decarbonise heavy transport and offering meaningful opportunities to industrial gas companies and a variety of smaller innovators, though carbon capture at scale remains a challenge.

At the same time, while the ITC and PTC extension boosts demand for renewables given the economics were already attractive, the speed of deployment may not be meaningfully impacted in the short term due to other constraints like permitting and interconnection.

### **Transport Incentives Call Out Minerals, Batteries, Hydrogen**

Seeking to decarbonise transportation, the act earmarks US\$9 billion in tax credits for EV purchases, including the first-ever tax credit for the purchase of used EVs. Currently, the EV tax

credit includes a cap of 200,000 vehicles sold per manufacturer, meaning companies like General Motors and Tesla would no longer qualify. The legislation eliminates this cap. The credit only applies, however, to vehicles assembled in North America and those whose batteries include a large percentage of components manufactured or assembled in North America. General Motors, for example, will get a tax credit for each domestically produced kWh of battery cells; the company has already built several battery plants with more on the way in Michigan, Ohio, and Tennessee, which puts it ahead of the competition in the ability to realise this tax credit.

Further, the EV batteries must also contain a large (and gradually increasing) percentage of critical minerals and components sourced from within the U.S. or from countries with U.S. free trade agreements (i.e., not China). This provision underlines the importance of metals and minerals necessary for the energy transition. Electrification requires large amounts of copper, for conducting electricity, and battery materials such as cobalt and lithium, for storing it. Mining these minerals entails substantial ESG risks. Extractive industries are, by nature, tough on the environment. Further, many mines operate in emerging economies with substantial risks due to reduced labor protections and lax governance and environmental regulations.

The minerals provision in the act should help raise standards and transparency for procuring metals and minerals necessary for the energy transition, leading to better environmental efficiency of operations, land usage and impact, water usage and labour conditions, four areas ClearBridge focuses on when engaging companies in [extractive industries](#).

ClearBridge has visited and engaged with holding MP Materials, for example, a U.S. mining company with a facility that supplies neodymium and praseodymium, two rare earth minerals used to make powerful magnets found in 90% of EV motors. The facility recycles all water from its process such that recycled water meets 95% of the facility's water needs, while the rest comes from groundwater. In the recycling process, wastewater is piped to an on-site water treatment plant where it is treated using reverse osmosis and then reused. In a recent engagement with the company, we encouraged it to disclose the groundwater extraction quantities that make up the other 5% and compare these to peers.

For heavy transport, there are demand-side incentives for commercial EVs, EV fleets and charging infrastructure for the U.S. Postal Service. Funding also exists for zero-emission school buses, garbage trucks and tow trucks. On the supply side, the act creates a PTC for clean hydrogen.

The credit of US\$3.00/kg for green hydrogen should be a game changer for hydrogen economics in the U.S., with Air Products and Chemicals, Linde and Air Liquide well-positioned to drive development of blue and green hydrogen.

### **Making Infrastructure and Buildings More Energy Efficient**

The act includes roughly US\$5 billion in funding across multiple federal agencies to help procure low-carbon industrial materials for transportation and building infrastructure projects, whether federal agencies are looking to construct high-performance green buildings, rebuild a road or school after a natural disaster, launch a sustainable building pilot, make a community more climate resilient or refurbish existing federal buildings.

Also on the buildings front, US\$12.5 billion in tax credits will go to residential energy efficiency. Households can save up to 30% with tax credits for home construction projects on windows, doors, insulation and other weatherisation measures that prevent energy from escaping homes. One area here ClearBridge has been following closely has been heat pumps; this is an energy-efficient alternative to furnaces and air conditioners that uses outside air to both heat a home in the winter and cool it in the summer. According to Trane Technologies, under ideal conditions, a heat pump can transfer 300% more energy than it consumes. In contrast, a high-efficiency gas furnace is only about 95% efficient. Further, heat pumps are powered by electricity, creating substantial potential fuel savings. Assuming the electricity comes from clean energy sources, heat pumps are also much more "green."

Heat pumps gained prominence in June when President Biden invoked the Defense Production Act of 1950 to call for more domestic production of heat pumps to reduce American energy bills, fight climate change and free up U.S. natural gas to support allies in Europe. The IRA, which provides US\$500 million in funding for expanding production of heat pumps as well as processing critical minerals, should be a plus for manufacturers like Trane and Johnson Controls.

Bloom Energy has also been capitalising on the need for lower-carbon energy at corporate facilities for some time, making solid-oxide fuel cell systems for on-site power generation serving a variety of industries, with customers including Home Depot and Walmart. Bloom's fuel cells convert natural gas, biogas or hydrogen into baseload (non-intermittent) electricity without combustion, so there is low or no carbon emission. Its emerging electrolyser business will help develop the hydrogen economy and benefit from the hydrogen tax credit in the IRA as well.

### **Renewables Demand Strong Despite Higher Inflation and Macro Uncertainties**

Renewable energy is gaining social acceptance, even more so now that energy price volatility, energy security via diversified and renewable sources as well as reducing energy bills are all top of mind for consumers, companies and policymakers. In this way, higher inflation and macroeconomic uncertainties,

while they roil equity markets at large, have reinforced the case for the energy transition. The IRA adds extra force to this movement.

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