

Landmark Federal Clean Energy/Climate Change Package Creates Wealth of Opportunities for Investors, Producers

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On August 16, 2022, President Biden signed the [Inflation Reduction Act of 2022](#), paving the way for the largest investment in clean energy development and climate change mitigation in U.S. history. The [Act](#) will provide approximately \$369 billion in government funding across a wide range of programs and initiatives for clean energy development and reduction of carbon emissions.

Key Takeaways from the Landmark Package

Some major climate change and clean energy provisions in the Inflation Reduction Act include:

- New tax credits for hydrogen production, including both “blue” hydrogen generated using gas or coal in conjunction with carbon capture and storage, and “green” hydrogen generated by renewable energy sources;
- Expanded and extended tax credits for a variety of clean energy technologies, including solar, geothermal, wind, biogas, fuel cells, battery storage and carbon capture technology;
- “Technology-neutral” tax credits starting in 2025 for zero-emission energy generation systems, to stimulate technological innovation and development of new renewable energy sources;
- Approximately \$30 billion in grant and loan programs for states and electric utilities to use in accelerating the transition to clean electricity;
- Tax credits amounting to approximately \$30 billion for existing nuclear power plants;
- More than \$60 billion of funding made available to support clean energy manufacturing in the U.S., including manufacturing of wind turbines and solar panels; and
- Other tax credits and grants to reduce industrial emissions.

In addition, the Act contains a number of programs targeting individual consumers, including a tax credit for buying a new or used clean energy vehicle, home energy rebate programs, and home energy efficiency tax credits.

Energy Tax Credits Under the Inflation Reduction Act

The expanded and extended tax credits for clean energy development are perhaps the most significant aspect to the Act and welcome news for investors in, and developers of, clean energy. The energy investment tax credit (“ITC”) under Section 48 of the Internal Revenue Code, and the production tax credit (“PTC”) under Section 45 of the Code, have been increased to 30% investment tax credit or production tax credits of 2.6 cents/KwH on the electricity output for 10 years (adjusted annually for inflation), respectively. These increased rates are retroactive to January 1 of this year for any project placed in service in 2022.

What anyone interested in the credits should note is that the revamped tax credits will generally be paid on a two-tiered system going forward. The Act establishes a reduced or “base” rate and imposes specific criteria that must be satisfied to otherwise receive the higher credit rate. Companies that meet prevailing wage requirements (not only during construction but also for repairs and alterations) and qualified apprenticeship requirements for clean energy/climate change projects can qualify for the increased credit rate. Given that the increased rate is five times higher than the base rate, there is ample incentive for project developers to meet these standards. IRS guidance on the wage and apprenticeship requirements is forthcoming. The intent of these new requirements is to stimulate growth of higher-paying jobs in the renewable sector. Developers will need to assess how the requirements affect project costs and they are certain to impact project contract negotiations.

So, what are prevailing wage and qualified apprenticeship requirements? The “prevailing wage” requirement is determined by the U.S Department of Labor and based on wages paid for similar types of jobs within the same market. The apprenticeship requirement states that project developers must employ “qualified apprentices” from [Registered Apprenticeship Programs](#) (i.e. these programs that are validated by the DOL or a corresponding state labor department). Depending on when construction starts, apprentices must contribute 10-15 percent of the total labor hours in order for projects to qualify for the increased rate.

The bill provides a transition period that will allow renewable developers with projects under development to adjust to the new prevailing wage and apprenticeship requirements and plan accordingly for new projects. Clean energy and carbon reduction projects that already are under construction, and any project that commences construction within 60 after the IRS issues its guidance on the wage and apprentice requirements, will not be subject to the additional requirements in order to receive the higher credit rate. Additionally, projects that are less than 1 MW AC will not be subject to the wage and apprenticeship requirement to receive the bonus rate.

Also of note under the Act are provisions for an additional 10% credit rate for the ITC, PTC and certain other credits, if eligible projects satisfy identified domestic content requirements. An additional 10% bonus credit is further available for projects located in an “energy” community, which includes brownfield sites and certain communities where coal, oil, or natural gas historically was produced. The result of these bonus credits is that some projects qualify for an ITC valued at up to 50% of the eligible project costs.

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energy jobs while reducing economy-wide emissions 40% by 2030. This is a generational opportunity for clean energy after years of uncertainty and delay. This unprecedented investment in clean energy will supercharge America's clean energy economy and keep the United States within striking distance of our climate goals."

American Clean Power

For solar developers, there is more good news - Solar energy has been added back onto the list of technologies eligible for production tax credits, along with wind energy, hydropower, geothermal power and other previously eligible resources.

Another notable change is that standalone energy storage facilities are now eligible to qualify for the ITC. Certain battery storage systems that are co-located with renewable energy generation systems were already eligible for the ITC. But industry advocates have long sought for standalone storage systems to be eligible because optimal locations for integrating battery storage into the grid are often remote from the generation source. Additionally, biogas will become eligible for the ITC.

Hydrogen, another technology with massive potential to provide energy storage capacity and accelerate the energy transition, is now eligible for a new tax credit under Section 45V of the Internal Revenue Code. For qualified hydrogen production projects placed in service in 2023 and subsequent years, a choice of a production tax credit or investment tax credit will be available. This credit will continue to be available for hydrogen projects that begin construction before the end of 2032. Notably, facilities that use ITC or PTC-eligible electric generating systems to power the production of clean hydrogen will be eligible for the Section 45V credit in addition to the ITC or PTC. The new Section 45V tax credit, paired with the potential to stack the credit with the ITC or PTC, is expected to jumpstart the burgeoning clean hydrogen industry by expanding financing options and reducing production costs.

Finally, the Inflation Reduction Act extends the duration—and increases the amount—of carbon capture tax credits [under section 45Q of the Internal Revenue Code](#). The amount paid varies depending on the technology in question, but in general, companies can qualify for double or even triple the tax credit offered under previous law. The new Act also significantly reduces the minimum amount of carbon capture required to qualify for tax credits. This should spur more players to enter the carbon capture market, which certainly may help with the energy transition and could play a role in expanding the use of hydrogen, for example.

For renewable energy projects that begin construction after 2024, the Inflation Reduction Act creates a new round of tax credits, which will effectively replace the traditional ITC and PTC. Eligibility for these new credits will be available for zero-emission electricity generation, without a requirement for any specific generation technologies to be used. Such credits will be available for projects that produce carbon-neutral electricity, at a base rate of 0.3 cents/kWh base rate and an increased rate of 1.5 cents/kWh of electricity generated, or at a rate ranging from six percent (base rate) to 30 percent (increased rate) of the taxpayer's cost of the energy property. These credits will remain available for eligible facilities that begin construction any time prior to the end of 2032.

Further, the bill allows early investors and developers to transfer renewable energy tax credits to other taxpayers, which is a significant change from the current rules that require a taxpayer have an interest in the energy property before it is placed in service to claim the ITC or PTC. This change permits the tax credits to be sold to third parties in exchange for cash, after the associated project is operational, beginning in 2023, which may have an impact on how the construction of renewable

projects is financed, given renewable developers frequently use capital contributions from tax equity investors to finance a portion of project construction costs. Now that the tax credits are transferable, it will be key to monitor how those deal structures evolve in response. It is important to note, however, that depreciation of project assets, is a benefit to tax equity investors that remains unaffected by the transferability of tax credits. Traditional tax equity investment structures that allow investors to receive the depreciation benefits, along with the tax credits, are unlikely to disappear.

Industry Reaction to the Climate Change Plan

Clean energy trade groups generally have praised the passage of the Inflation Reduction Act.

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With the Inflation Reduction Act, the federal government is putting significant money on the table for clean energy production and emissions reduction. There is likely to be significant interest in new opportunities to obtain funding and take advantage of incentives. The earlier companies begin working on their green energy plans, the more benefits they are likely to reap from these expanded

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