

The Inflation Reduction Act Provides Potential Game-Changing Benefits for U.S. Solar Industry

August 15, 2022

The U.S. Senate and House of Representatives have passed the Inflation Reduction Act of 2022 (the Act), which climate analysts have hailed as game-changing for the growth of solar power, and solar manufacturing, in the United States. The Act has numerous key provisions aimed at combating climate change, including several changes to the tax laws that will significantly impact the U.S. solar manufacturing industry.

The Biden Administration estimates that the Act will result in an investment of \$370 billion in energy security and climate change programs, with the goal of reducing carbon emissions by 40% by the year 2030. Importantly, the Act's provisions not only incentivize increased installations of solar energy, but provide key benefits for companies manufacturing solar products, like cells and modules, in the United States, advancing a first-ever American clean energy industrial policy.

The most significant provisions of the Act affecting the U.S. solar industry include:

- **Creating an Advanced Manufacturing Production Credit for Solar Components:**

The Act creates several advanced manufacturing production tax credits for certain clean energy components, for 10 years, referred to as "45X" credits. The congressional Joint Committee on Taxation's analysis^[1] estimates that the Act will direct more than \$30 billion during the decade to advance American

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manufacturing of solar panels and components, wind turbines, inverters, and batteries for electric vehicles and the power grid, including for mining and processing of the critical minerals used in these products.

Solar components eligible for these credits include thin film photovoltaic cell or crystalline photovoltaic cells, photovoltaic wafers, solar grade polysilicon, polymeric backsheet, and solar modules. Notably, the amount of each credit is prescribed either as a set amount per watt, e.g., 4 cents multiplied by the wattage capacity for photovoltaic cells, or as a set amount per production quantity, e.g., \$12 per square meter for photovoltaic wafers. These provisions, which allow government support to increase as production volumes rise, are expected to significantly expand solar manufacturing in the United States, including wafer and cell manufacturing where China has a near monopoly on global manufacturing.

- **Extending & Expanding Section 45 Production Tax Credit (PTC) and Section 48 Investment Tax Credit (ITC):**

The Act extends the Section 45 PTC tax credit of 1.5 cents per kilowatt hour for electricity produced from renewable energy sources, including solar, and the Section 48 ITC 30% tax credit. Both of these programs will be extended until 2025, and then converted to a clean electricity production tax credit (CEPTC) and clean electricity investment credit (CEITC). This means that production and investment tax credits will be in place for 10 years (until 2032), a long-term commitment that is important for development, particularly for large-scale solar products.

The Act also adds solar facilities to the list of PTC-eligible facilities. The PTC is based on the power produced by a project over 10 years, while the ITC allows investors to claim a one-time tax credit based on the project's value.

The credits will now be subject to a two-tiered rate structure that furthers the Administration's focus on worker-centric policies. In order to qualify for the full rate, project laborers must be compensated at or above "prevailing wages" and a percentage of all labor hours must be performed by "qualified apprentices" that participate in a registered apprenticeship program. Small solar projects, like residential projects, automatically qualify for the full rate. Projects that do not meet these worker standards will be eligible for the credits at only 20% of the full rate.

- **Additional Tax Credits for Domestic Content and Facilities in Certain Communities:**

The Act provides additional tax credits for PTC or ITC-eligible projects in certain circumstances. If, in addition to meeting the wage and apprenticeship requirements, all iron and steel components and at least 40% of the total cost of manufactured products for the solar project are produced or manufactured in the United States, the project will be eligible for an additional 10% credit. A further 10% credit is available for solar projects situated in certain energy communities, such as areas with significant employment from the coal, oil, or natural gas industries. ITC-qualified projects can also receive an additional 10% credit if located in a low-income community or an additional 20% credit if part of a qualified low-income residential building or economic benefit project.

The Act, passed in the Senate on August 7, 2022, with a tie-breaker vote from Vice President Harris, and in the U.S. House of Representatives on August 12, will likely be signed into law by President Biden this week. Roth Capital has previously estimated that the Act's provisions regarding the solar industry could lead to an increase in solar manufacturing capacity in the United States of 25 GW,^[2] while Princeton University estimated that the Act could cause utility-scale solar deployment in the United States to increase fivefold annually, from about 10 GW per year in 2020 to 49 GW in 2024.^[3]

Wiley continues to monitor this legislation and all supply chain and solar industry developments. Wiley's comprehensive Supply Chain and Transactional Support practices complement its robust International Trade and National Security practices with significant expertise in trade remedy proceedings (including in the solar industry), government funding processes, and many other industry competitiveness strategies. Please contact the attorneys listed on this alert if you have any questions about these or related areas.

[1] The Joint Committee on Taxation, JCX-18-22 (August 09, 2022), available [here](#).

[2] Roth Capital Partners: The Solar Snapshot - IRA on its Way; NEM3, UFLPA Updates (Aug. 5, 2022).

[3] Princeton University Rapid Energy Policy Evaluation and Analysis Toolkit, *Preliminary Report: The Climate and Energy Impacts of the Inflation Reduction Act of 2022* (Aug. 2022), available [here](#).