

AN UPDATE TO THE INFLATION REDUCTION ACT

A YEAR OF MOMENTUM AND FUEL TO A U.S. MANUFACTURING INVESTMENT SUPERCYCLE



Introduction

A year has passed since the Inflation Reduction Act (IRA) was signed into law on August 16, 2022. There is significant momentum to bolster U.S. competitiveness in disruptive technologies such as renewable energy, batteries, and electric vehicles (EVs). The IRA paired with the Bipartisan Infrastructure Bill signed in 2021 provides an estimated \$370 billion in federal funding over the next decade to promote a transition to clean energy.

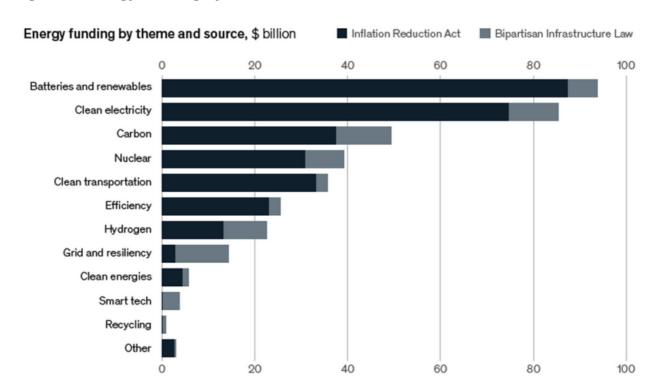


Figure 1: Energy funding by theme and source

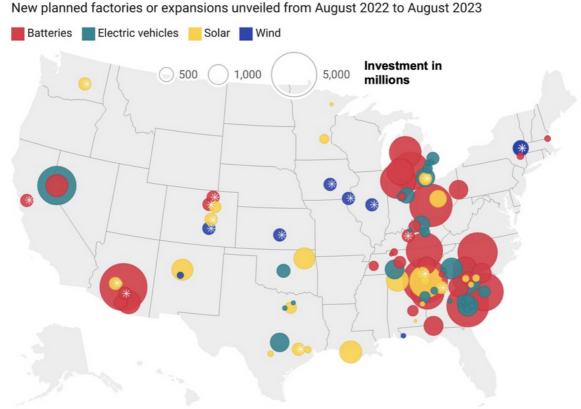
Source: McKinsey & Company - The Inflation Reduction Act: Here's what's in it

Announced Manufacturing Projects

Nearly \$110 billion in U.S. clean energy projects have been announced since the IRA was passed. The electric vehicle (EV) and supply chain (including battery technologies) alone has accounted for more than \$70 billion and another \$10 billion is attributable to manufacturing related to solar energy. According to Goldman Sachs, the IRA's impact could encourage \$11 trillion of total infrastructure investments by 2050.



Figure 2: Clean Energy Manufacturing Projects Announced Since IRA Passage



*Starred projects have not announced investment amounts

Source: American Clean Power, Canary Media IRA Analysis

Accessing federal funding is not without its challenges however, as the U.S. faces hurdles as international companies have controlling positions and technologies in many aspects of the clean energy supply chain, from raw materials to finished products. This presents both opportunities and risks to companies pursuing government assistance.

Electric Vehicle Manufacturers

One of the more significant policy changes has been through the Clean Vehicle Credits program. Under the IRA, the current maximum credit of \$7,500 per vehicle is tagged with new restrictions enacted in April 2023 with escalating requirements through 2029 to promote domestic battery and critical minerals sourcing. Prior to the IRA, EV tax credits were capped at 200,000 vehicles, with several OEMs expected to hit that mark this year. The IRA has removed caps by extending credits for 10 years and lifting the manufacturer cap. To qualify under the new restrictions however, a certain portion of battery components and critical materials must be sourced, manufactured, or assembled in North America. This has caused a short-term strain on automotive manufacturers as many electric vehicles would currently be ineligible and consumers remain price sensitive at the point of purchase. Large manufacturers have already taken advantage of this and have announced further investment in new and existing facilities.



EV Partnerships with Battery Manufacturers

The IRA has paved the way for increased domestic investment in battery production, offering new opportunities for manufacturers in this sector. Numerous partnerships between U.S. automakers and international battery manufacturers (particularly South Korean) have been announced to create a domestic supply chain through the next decade. Select examples include General Motors and LG, Ford and SK On, and Stellantis and Samsung. Highlighting Ford's investment is the company's new "BlueOval City" mega campus in Tennessee and twin battery plants in Kentucky, a \$11.4B investment slated to create 11,000 jobs and power a new line up of advanced EVs.

Collectively, these partnerships have the potential to achieve an annual capacity exceeding 1,200 gigawatt-hours by the year 2030. This would provide batteries for approximately 18 million electric vehicles, utilizing prior forecasts from Tesla that suggest approximately 1.5 million EVs can be powered by a 100 GWh capacity.

Solar Initiatives

The IRA has rolled out several initiatives to boost solar demand and production domestically.

- Reinstates the 30% investment tax credit for qualifying solar projects that meet certain wage and apprenticeship requirements.
- Extends the production tax credit ("PTC") to include energy generated from solar projects.
- Provides incremental investment and production tax credits for solar projects that meet certain domestic content and location requirements.
- Offers tax credits for solar modules and solar module components manufactured in the U.S.

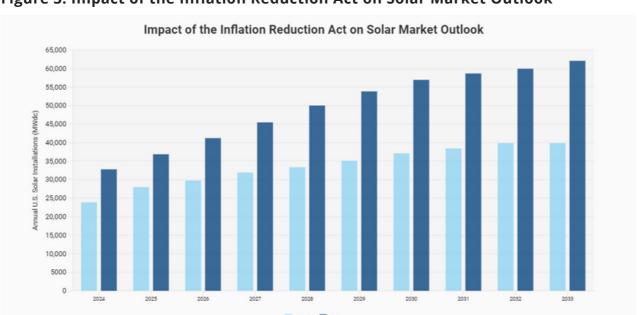


Figure 3: Impact of the Inflation Reduction Act on Solar Market Outlook

Source: Solar Energy Industries Association



More than 40 manufacturing announcements across the solar supply chain have been announced since passing the IRA. As an example, First Solar announced a fifth U.S. factory, a \$1.1 billion solar panel manufacturing plant in Louisiana that is expected to be complete in the first half of 2026. REC Silicon also announced an agreement with Mississippi Solar to develop a U.S.-based solar supply chain from raw materials to fully assembled models which will see investments in Washington State and Mississippi.

Impact on Middle-Market Participants

Looking beyond the largest OEM participants, a much broader supply chain of middle-market companies will benefit from the transformational investments taking place in the electric vehicle and solar industries, among others. This includes component suppliers to the end-use products, as well as those companies directly involved in supporting the infrastructure buildouts currently taking place.



Examples of Suppliers to EV and Battery Infrastructure Buildouts

- Engineering and construction services
- Specialty HVAC, electricity and water systems
- Construction equipment companies
- Assembly line and automation providers
- EV charging stations
- It is worth highlighting that Tier 1 and 2 auto suppliers will also follow their OEM customers to new locations with infrastructure investments of their own

Examples of Component Suppliers to the Solar Industry

- Solar panels
- Solar racking and mounting systems
- Inverters and power optimizers
- Energy storage systems
- Metering/monitoring systems
- Cables



In Conclusion

Notwithstanding the challenges represented by the highly global nature of battery and solar technologies amid considerable investments made over many decades outside the U.S., the significance of domestic investment taking place is staggering. A broad domestic supply chain stands poised to benefit for years into the future. This will fuel M&A activity for industry participants looking to tap into the growth associated with these markets. If you would like to learn more about current M&A market conditions in the manufacturing industry and GCG's investment banking advisory services, please reach out to GCG Managing Director Peter Frankfort



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