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ONE YEAR IN:

The Inflation Reduction Act in Review

When President Joe Biden signed the sweeping Inflation Reduction Act (IRA) into law in August 2022, he launched a renewable energy revolution. Making the most of the IRA, however, will mean confronting challenges like grid interconnection barriers, skilled workforce shortages, and the threat of incentive rollbacks.

Fortunately, streamlining clean energy regulations, expanding vocational training, and insulating programs from repeal can ensure the IRA's impacts will be felt decades to come. The IRA can be a long-term force for America's renewable future—but only if we equip workers, modernize infrastructure, and fortify regulatory policies to accelerate the journey.

WHAT WE KNOW:

The IRA's Impact So Far

The IRA's generous incentives have catalyzed dramatic growth across the renewable energy sector. [More than \\$240 billion](#) has since flowed into clean energy manufacturing and infrastructure projects, including over \$86 billion for 270+ new solar, wind, battery storage, and carbon capture projects.

As a result of this growth, the renewable job market—colloquially dubbed the “green collar workforce”—is booming. With massive amounts of clean energy and related infrastructure being developed, [170,000 direct jobs](#) have been created since the IRA's passing. These jobs span a wide range of roles, including engineering, business development, manufacturing, construction, transportation, and everything in between.

The future of green collar work looks bright, with the IRA's economic impact projected to grow substantially in the coming decade. By 2030, as many as [1.5 million new jobs](#) could be created. Growing employment from the IRA will also be crucial to mitigating any [job losses](#) that occur in the sector—including those caused by the California Public Utilities Commission's (CPUC) recent slashing of residential solar incentives with [NEM 3.0](#).



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The IRA's Impact So Far (Continued)



What the IRA Means for Solar

Already the [fastest growing](#) renewable energy source, the solar industry in particular has been boosted by the IRA, thanks to the extension and expansion of the [Investment Tax Credit](#) (ITC). With the ability to save 30% of project costs through the year 2032 (and possibly beyond), the ITC has generated a new wave of solar deployments.

Corporate investment in the solar industry [jumped massively](#) in the first half of 2023, growing to over \$18 billion. By the end of the year, the U.S. is on track to add nearly [33 gigawatts](#) (GW) of solar capacity—more than a third of the nation's total installed nuclear capacity. Additionally, the Solar Energy Industries Association (SEIA) predicts a total of [377 GW](#) of solar will be deployed in the U.S. by 2028, almost tripling the country's current installed capacity. By 2050, solar energy is on track to be the [greatest source of generating capacity](#) in the U.S.



What the IRA Means for Battery Storage

The massive growth in intermittent clean energy sources demands a corresponding increase in energy storage to ensure a reliable supply of electricity. Fortunately, the IRA's incentives extend to battery storage.

Developers can now receive [\\$35 per Kilowatthour](#) (kWh) of domestically produced battery cells and \$10 per kWh for battery modules. Crucially, standalone storage systems qualify for the subsidies as well, answering the industry's calls for policy flexibility. The results speak for themselves, with [4.7 GW battery storage coming online](#) in the 9 months following the IRA's passage.



What the IRA Means for Electric Vehicles (EVs)

The IRA offers generous electric vehicle incentives for consumers and commercial fleet operators. A total of \$7,500 is available for full-battery electric and plug-in hybrid models though some conditions need to be met on the consumer side. For an electric vehicle model to [qualify for the full \\$7,500](#) subsidy, 40% of its minerals and 50% of its battery components must be sourced from North America or a country covered by a U.S. free trade agreement (i.e., Chile, South Korea, etc.).

Automakers are ineligible for tax incentives if any battery components are sourced from 'controversial' countries including China, which is [overwhelmingly](#) the largest processor and manufacturer of EV materials. Due to these restrictions, fewer than half of EVs currently on the market qualify for the full \$7,500. Still, there are [options available](#), including the [Ford F-150 Lightning](#), [Chevrolet Bolt](#), and [Tesla Model 3](#).



The Big Picture: A Cleaner, Greener Nation

The IRA is already spurring measurable emissions reductions, with climate research group Rhodium projecting that the legislation will slash America's greenhouse gas emissions by [29% to 44% below 2005 levels](#) by 2030.

Overall, the combined investments driven by the IRA—as well as the [Bipartisan Infrastructure Law](#)—are projected to offset over 1 billion tons of greenhouse gas emissions by 2030. That's a tremendous amount of progress in a very short period of time and reaffirms the U.S. as a global leader in the fight against climate change.

Remaining Questions about the IRA

While the IRA is propelling rapid growth in both renewables and emissions reductions, some key uncertainties in its policy design remain unresolved. Industry groups are still awaiting final guidance from the Treasury Department and the Internal Revenue Service on several of the IRA's provisions, making the planning of renewable energy projects more challenging than it otherwise would be.



Domestically Manufactured Content Requirements

The Treasury's current Domestic Content Bonus Credit eligibility rules pose challenges for solar projects. For instance, if even one minor component of a solar panel is foreign-made, the entire U.S. manufacturing portion seems ineligible—and most solar panels have up to eleven components. If just a single bypass diode in a domestically produced panel originates abroad, the U.S.-based manufacturer's whole value-add could be excluded from the formula's numerator and inappropriately counted against overall project eligibility.

Moreover, 'major components' under current Treasury guidelines include solar trackers as "manufactured products"—even when delivered disassembled to project sites. Since solar trackers are not needed or used in many arrays, this policy impedes the vast majority of solar projects in terms of qualifying for the IRA's domestic content bonus tax credit.

The industry is also awaiting clarification regarding the distinction between "manufactured products," which must meet 50% domestic content thresholds, and more generic "construction materials," like foundation posts, that must be 100% American-made.

Project developers have so far faced an uphill battle in obtaining the detailed data from manufacturers that is required to calculate domestic content fractions. Developers need more transparency on wages, payroll taxes, and materials costs to accurately determine what share of their major technology components qualify as truly domestic. Currently, this data barrier limits project qualification for IRA incentives.

While initial 10-year projections were \$370 billion, they have now almost doubled to \$526 billion with room to grow even higher

Remaining Questions about the IRA (Continued)



How Might Political Changes Impact the IRA?

One year in, the IRA has made a significant impact on the renewable energy landscape. Unfortunately, looming threats could jeopardize the law's vast clean energy investment potential—as well as tens of thousands of well-paying jobs.

Potential changes in Congress pose a substantial risk. Coordinated efforts from Conservative, anti-climate groups to repeal IRA incentives could gain traction via legislation or appropriations battles. On the other hand, [Republican](#) states are benefiting the most from the IRA's clean energy investments and subsequent job creation. As repealing the IRA would impact thousands of livelihoods in revitalized neighborhoods, even a Conservative-leaning Congress might hesitate to pull the plug.



What's the Final Price Tag?

Since the IRA was first passed, its cost estimate has significantly increased—a byproduct of the legislation's uncapped tax credits. While initial 10-year projections were [\\$370 billion](#), they have now almost [doubled to \\$526 billion](#) with room to grow even higher. Deficit hawks may use soaring price tags as justification to scale back clean energy credits and subsidies, which in turn could dampen private sector confidence. The rising cost of the legislation, however, ultimately means the IRA is proving successful in spurring new clean energy and storage projects.



Improving Access to the Tax Equity Market for Smaller-Scale Developers

The billions of dollars in tax credits and incentives now available from the IRA make tax equity deals even more crucial for industry and project development. Despite this, the existing tax equity market remains highly concentrated in a few large Wall Street banks. For smaller renewable energy companies, tapping into these lucrative capital flows remains a key challenge.



Addressing Financing Roadblocks

The IRA's tax credit transfer provisions allow renewable energy developers to sell state and utility-scale project credits in exchange for upfront project financing. However, uncertainties linger around securing debt against future credit sale revenue streams. Banks remain hesitant about the debt volume they may issue, based on the expectation of impending tax equity funds.

Traditional project debt also poses risks under this monetization route. If developers default on loans, bank foreclosures could trigger tax credit recapture liability or loss of Production Tax Credits that were expected later in the project lifecycle.

To avoid credit clawbacks, creative mechanisms that allow debt issuance without the possibility of cutting off tax credit revenue need to be developed. Resolving these financing barriers will allow smaller developers access to the vital tax credit capital they need to deploy new projects.

Unclogging Industry Bottlenecks to Unleash Growth

Streamlining IRA Rules and Processes

Complex application requirements for IRA incentives [pose barriers to participation](#) instead of encouraging it. It's vital to simplify the IRA's tax credit rules and qualification processes; for instance, consolidating programs and clarifying standards where possible. This will improve access to growth opportunities for both big and small developers.

Scaling Clean Energy Workforce Training Programs

A critical shortage of workers remains in the [clean energy](#) sector, including electricians and welders, HVAC technicians, solar installers, and EV manufacturing and assembly staff. Despite the high demand for electricians, for example, up to 80,000 annual job openings are going unfilled. A lack of qualified green collar professionals poses a significant threat to scaling the IRA's impact, making the development of a robust workforce critical to its success.

Accessible workforce training programs need to be made available throughout the country. Although initial IRA drafts included a green jobs training program—the proposed Civilian Climate Corps—the initiative was removed from the final draft of the bill. Still, there are opportunities for workers looking to transition into 'green' work, including energy-related community college courses, apprenticeships, and other vocational training.

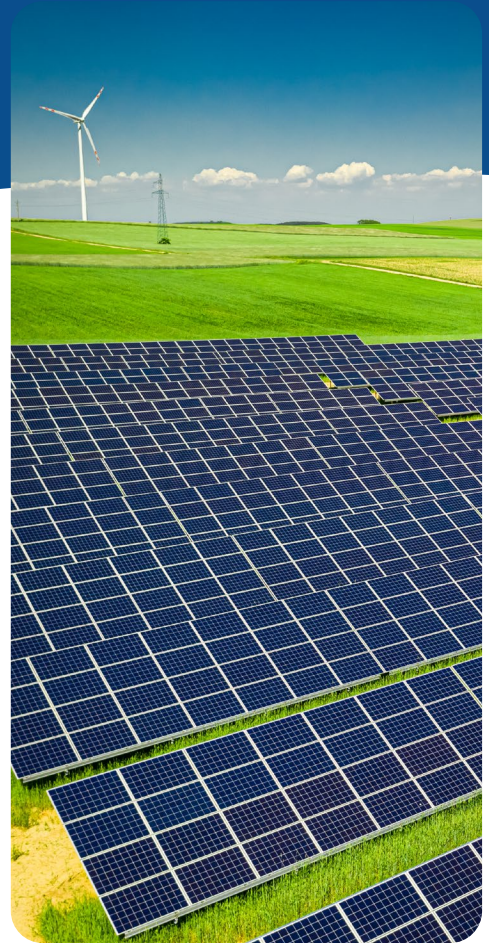
Accelerating Interconnection and Permitting Reform

As renewable energy deployment soars, outdated grid infrastructure, arduous permitting processes, and inefficient bureaucracy has led to multi-year project queues and delays. Currently, [more than 1,350 GW](#) of renewable energy generating capacity—as well as nearly 700 GW of energy storage projects—sits awaiting approval to connect to the grid. To speed up project deployment, states, utility commissions, and utilities need to modernize interconnection processes, equipment, and regulations.

Ensuring Equitable Access to Clean Energy Credits

The [24C Investment Tax Credit for household efficiency upgrades](#) is currently non-refundable, which skews the policy's benefits towards those with higher incomes. Making the tax credit refundable would allow low-income families to benefit from it, regardless of the overall tax burden. Otherwise, wealthier households that are better positioned to utilize the tax discount—yet need it less—will continue to reap most of the benefits. Ensuring fairness in the renewable energy transition is key to ensuring that all households can benefit from carbon reduction and energy savings.

There's also a major demographic who can't own their own solar and storage systems: [renters, who now comprise over a third of American households](#). Further policy support and investment in [community solar](#) and storage projects will be key to facilitating access to clean energy and savings for renters.



The Path Forward Demands Collaboration

The clean energy transformation depends on sustained participation from the private and public sectors, as ongoing engagement can help resolve legislative and regulatory inconsistencies that impede project implementation. Governments rely on public and private input to pinpoint opaque IRA (and other legislative) complexities that obstruct accessibility so they can refine the legislation as needed.

Business partnerships assist in navigating the complex financing channels that make transition away from fossil fuels possible. Industry groups are also well-positioned to spread the word about lucrative rebates through contractors, employees, and public awareness campaigns.

Shoring Up the IRA

Private investment in clean energy is tied to the durability of IRA credits and subsidies, which in turn relies on political continuity. Since the specter of potential repeal remains a chief concern for companies leveraging IRA incentives, state legislative buffers against federal political swings are needed to mitigate uncertainty and hedge against risk. With [the majority of IRA projects in Republican districts](#), it's important for industry advocates to cite local economic benefits to build bipartisan support.

Smart Solar and Storage Growth

Beyond increasing generating capacity, strategic solar and battery storage deployments enable the smooth integration of further renewables into the grid. Utility-scale storage installations not only ensure reliable renewable power is available at any time of the day or night, but also helps retire polluting peaker plants by offsetting demand loads.

The IRA is Just the Beginning

The IRA's clean energy procurement mandates, tax reforms, and manufacturing incentives are profoundly impactful, yet this is only the beginning for climate-friendly legislation. As the disastrous effects of rapid climate change become more apparent and disruptive, public support is quickly growing for green initiatives, setting the stage for even more robust [policies](#).

With vast opportunities unlocked by the IRA for solar, energy storage, and EVs, renewable energy developers have the chance to catalyze transformative growth. Through conferences, webinars, reports, and custom advisory services, Intersolar North America and Energy Storage North America provides clean industry professionals with the connections, training, and insights necessary to capitalize on the IRA's historic investment.

Get in touch today to expand your project development knowledge and forge partnerships that can accelerate the future of the energy transition.

isnainfo@divcom.com | intersolar.us

