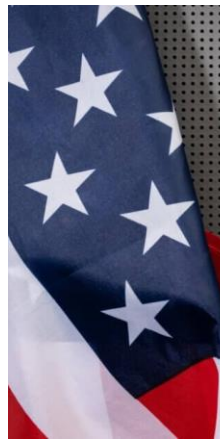


INFLATION REDUCTION ACT

2022 ISSUE II



WILL IT DECREASE OR INCREASE INFLATION?

The IRA is the largest investment in climate change in the history of the United States, striving to reduce emissions 40% below 2005 levels by the end of this decade

INFLATION REDUCTION ACT (IRA): IMPLEMENTATION WILL MAKE OR BREAK ITS SUCCESS

The IRA is the single biggest investment (\$369 billion) into climate and the energy sector in U.S. history. It has potential to achieve many of the U.S.'s energy and climate related goals, including achieving energy independence and reducing carbon emissions 40% below 2005 levels by 2030.

Supply chain bottlenecks, geopolitical instability, massive stimulus, and high government funding for various social programs has led to the highest inflation in the United States in the last 40 years. Most experts agree that the IRA will have little to no impact on inflation in the short run¹ and could even result in slightly increased inflation.² Increasing inflation requires action from the Federal Reserve, making it

even more likely that the U.S. economy will be forced into a recession. This will delay or defer investments by the private sector and undermine value realization from the IRA.

The success of the IRA will largely depend on the ability of the government, private sector, utilities, and consumers to come together to implement its initiatives, leveraging incentives and investments. Implementation may prove to be challenging, as the law leaves a lot of room for interpretation. This can create uncertainty and ultimately hinder its overall impact if the government does not take actions to clarify and ease processes to encourage participation of private investors and consumers across the market. Further, the private sector needs to understand that the intent of this law is to support innovation with skin in the

game, which means solutions proposed through the IRA should have investment-grade business cases and sustainable business models. Local and state governments need to streamline their processes, and ensure that they have institutional capabilities to design, develop and implement projects within stipulated timeframes. Utilities and system operators have been perceived as bottlenecks, demonstrated by the huge backlog in interconnection queues and approval delays. Interconnection, siting, and permitting need to be accelerated with regulatory and technological interventions.

In this issue, we discuss the implementation challenges and recommendations to ensure that the IRA ultimately delivers on the promise of inflation reduction to Americans!

The key target of the Inflation Reduction Act is to transition to a more clean and sustainable energy sector, leveraging the largest investment in climate actions: a whopping \$369 billion.

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INFLATION REDUCTION ACT

The Inflation Reduction Act is best known for its historic investments to address climate change and improve energy security. It invests \$369 billion toward advancing the energy sector (see box 1³⁴). This law claims that it would lead to a 40% reduction in emissions by 2030 from 2005 levels, close to President Biden's goal of a 50% reduction.

The law aims to address climate change impacts and energy security concerns through incentives for companies, agencies, and individuals, as well as provisions to help communities affected by climate change impacts and pollution. The funds put toward these initiatives will come in the form of tax credits, rebates, loans, and grants, both for consumers and companies. It will also allow for the creation of a national Green Bank, which would leverage private funding for clean energy projects. It also offers incentives for companies to manufacture technologies in the U.S., giving bonuses for meeting domestic content requirements.⁵ It will impose fees on methane emissions to penalize fossil fuel companies for excess emissions. The law addresses environmental justice issues by investing in forest and coastal restoration and in monitoring and cleaning pollution in disadvantaged communities, as well as building resilience to the impacts of climate change. It also mandates new oil and gas leasing in the Gulf of Mexico and off the coast of Alaska.

The law takes a technologically neutral approach to decarbonization, allowing companies with a zero carbon footprint, as well as those that strive to capture carbon, to be eligible for the same incentives. Through this law, the federal government wants to reduce risk for investments by the private sector in clean energy technologies and projects which would otherwise be considered risky from technology, business model, regulatory and policy uncertainty perspectives.

While this law promises to reduce emissions 40% from 2005 levels by 2030, some experts have claimed that the actual number will fall somewhere between 32% and 42%.⁶ However, given that emissions were already estimated to decrease between 24% and 35% from 2005 levels even before the passing of this bill,⁷ the actual impact will be hard to quantify. Additionally, certain measures in the law may undermine the proposed reductions in the emissions due to the incorporation of new oil and gas leasing mandates that were added to secure the support needed to pass this bill. This feature could lessen the positive environmental impacts of the law, like fighting climate change and transitioning away from fossil resources.

However, if implemented correctly, this law still has potential to reduce emissions, as well as lower the cost of energy for Americans and increase domestic production. It will certainly put the United States on a more sustainable path towards energy security, and may help blunt the catastrophic impacts of climate change. This law also allows America to restore its credibility and leadership on climate related issues in the world.

KEY PROVISIONS OF THE IRA

- **\$60 billion in renewable energy infrastructure** including solar panels, wind turbines, heat pumps, electric vehicles, and energy efficiency improvements
- **\$27 billion toward the Greenhouse Gas Reduction Fund (GGRF)** which will invest in clean energy technologies
- **\$9 billion toward home energy rebate programs**
- **\$3 billion** toward community led projects in **environmental justice communities**
- **\$20 billion** to help farmers switch to more **sustainable agriculture practices**
- **\$3 billion** to electrify **USPS vehicles**
- **\$1 billion** for **clean school and transit buses and trucks**
- **\$3 billion** to **clean up air pollution at ports**
- **\$2.6 billion in coastal resilience grants** to help restore communities and ecosystems
- **\$1.3 billion** for **used EV credits** over the next decade
- **\$7.5 billion** for **new EV credits** over the next decade

¹ <https://budgetmodel.wharton.upenn.edu/issues/2022/7/29/inflation-reduction-act-preliminary-estimates>

² <https://www.forbes.com/advisor/personal-finance/inflation-reduction-act/>

³ [What the Inflation Reduction Act Means for Climate | Earthjustice](https://www.earthjustice.org/newsroom/press-releases/2022/07/29/what-the-inflation-reduction-act-means-for-climate)

⁴ <https://www.finance.senate.gov/imo/media/doc/7.29.22%20Estimate%20of%20Manchin%20Schumer%20agreement.pdf>

⁵ [Inflation Reduction Act Provisions for Renewable Energy Industry \(natlawreview.com\)](https://natlawreview.com/article/inflation-reduction-act-provisions-for-renewable-energy-industry)

⁶ <https://rhg.com/research/climate-clean-energy-inflation-reduction-act/>

⁷ *ibid*

IMPLEMENTATION CHALLENGES AND IMPACTS

The IRA has enormous potential to impact the U.S. economy, society, and environment. However, it faces a number of implementation challenges which need to be proactively addressed by stakeholders, including federal and state governments, regulators, public utilities, private sector investors, and technology providers.

Government Intent vs. Reality

The law may not benefit mass market consumers:

One of the key objectives of the IRA is to advance the adoption of clean technologies by mass market customers. However, some of the biggest incentives, such as tax credits for EVs, are misguided. Middle-income customers cannot afford the EVs being manufactured today due to prohibitive costs, which are caused by an obsession with long range (300 miles) vehicles, despite the fact that less than 5% of customers drive even 100 miles a day. Most Americans on average drive only 30-40 miles per day. For people with range anxiety, hybrids may be a solution, and the people who want that choice can get them without subsidies. Focusing incentives on car models with smaller batteries could help the middle class afford EVs, allowing for an easier transition away from combustion vehicles. The clean energy transition cannot happen without transforming people's bad habits!

The struggle for early-stage technologies to compete:

The companies that are selected to receive federal funding will have a significant impact on what path the nation takes on its decarbonization journey. Many innovative technology companies may not be able to present strong applications due to a lack of understanding of the DOE's current process for grant applications, which is perceived as burdensome.⁸ This can present a serious challenge for smaller companies and may put some companies developing emerging technologies at a disadvantage.

Compromise with the fossil fuel industry may create zombies:

The inclusion of new leasing mandates for oil and natural gas drilling in Alaska and the Gulf of Mexico reversed a decision in January of this year to block lease sales.⁹ These mandates will allow the fossil fuel industry to further grow and depress value propositions of clean energy

technologies in the short and medium-term. On the other hand, in the long-term, clean energy technologies will become cheaper, creating stranded oil and gas assets. This may become a bottleneck to the clean energy transition and stall progress towards decarbonization.

Lack of institutional capabilities: To fully take advantage of the funding and opportunities provided by the new law, local and state governments, as well as utilities, will need to develop bankable project proposals. The number of experienced personnel retiring has increased since the start of the pandemic. Because of this, many cities, municipalities, and governments are depleted of human resources, reducing their institutional capabilities. Most entities do not have a department focused on grant writing, managing projects, and ensuring compliance, which will hamper their ability to propose or implement new projects.

Private Investment vs. Government Assistance

Lack of investment grade business models: Federal grants and loans are down payments to enable innovations. The intent of federal grants and loans is to enable markets and attract private investments. Many investors are accustomed to the idea of short-term returns on their investments, which will not be the case for many newly developed technologies. While the additional funding from the IRA mitigates some of this risk for investors, private investors will have to put their skin in the game and transition to more long-term thinking with green investing. This will require business models with solid, monetizable value streams.

Challenges to Utilities

Slow process of interconnection: Studies have shown that in order to meet the goal of decarbonization, solar and wind energy and energy storage deployment will have to dramatically expand.¹⁰ The process of interconnecting these resources to the grid is complex and is not designed to accommodate the levels of clean energy necessary to reach these goals, resulting in many projects being delayed while awaiting approval. This can cost companies projects as negotiations fall apart and options expire while they wait in the queue.¹¹ This process has created a bottleneck, threatening the U.S.'s ability to transition to clean energy,

⁸ <https://www.gao.gov/products/gao-18-676t#:~:text=GAO%20has%20identified%20challenges%20to%20federal%20grants%20management,them%20and%20can%20burden%20recipients%20of%20federal%20grants>

⁹ <https://www.usatoday.com/story/news/nation/2022/08/18/climate-change-inflation-reduction-act-oil-gas/7837956001/>

¹⁰ <https://www.energy.gov/eere/i2x/interconnection-innovation-e-xchange>

¹¹ <https://www.utilitydive.com/news/energy-transition-interconnection-reform-ferc-qcells/628822/>

especially because approaches can differ based on location. Additionally, developers complain that regional transmission organizations do not share enough information for them to apply for interconnection with all the necessary information, turning the process from simply seeking approval to fact finding. The IRA's goals will not be achieved regardless of funding if projects are unable to secure interconnection approval.

Regulatory Issues: Utilities are highly regulated at the local level in order to protect consumers from the harmful effects of their naturally monopolistic business models. Critics have alleged that this approach stifles competition, to the detriment of the quality of service.¹² Additionally, as the U.S. traditionally takes a bottom-up approach to regulation, utilities across the nation are subject to different rules depending on where they are located. These concerns can complicate the deployment of renewable energy technologies as each utility is subject not only to the overarching requirements set forth by the IRA, but also to their own local regulations and input from stakeholders.

Siting and Permitting Issues: The siting process has been called a "varied patchwork" of state and local siting laws and regulations, which has greatly hindered the deployment of renewable energy.¹³ There has also been a rise in "not in my backyard" (NIMBY) sentiments across America. The combination of these factors creates a complicated environment for developers wishing to pursue

renewable energy projects, often causing delays. In order to maximize the use of funding that will be available over the next 10 years, utilities will have to find ways to combat these challenges so that projects are not delayed, wasting opportunities to capitalize on available grants and loans.

Challenges to Technology Providers

Domestic content requirements: The IRA stipulates that production of renewable technologies must meet a minimum percentage of domestic content in the materials used in order to qualify for bonus payments, and in some cases, to utilize the elective payment method that facilitates an easier use of tax credits. This could present a challenge in cases where the materials are more costly if sourced domestically or are not as readily available in the U.S.

Reluctance to deploy: Many early-stage technologies are promising but do not have established track records of success. While loans and grants are designed to mitigate some of the risks associated with performance, many technology providers struggle to convince utilities or site owners to deploy new solutions. Incentives will be required for utilities and site owners to try more innovative actions. Additionally, the lack of standards is another a barrier to deployment. The DOE and other agencies should focus on assessing the impact of current standards and developing a strategy to fast-track a standardization process to enable investments under IRA.

How Vrinda can help stakeholders implement IRA/BIL funding



¹² <https://www.investopedia.com/ask/answers/070915/how-strongly-does-government-regulation-impact-utilities-sector.asp>

¹³ <https://www.theregreview.org/2022/03/16/miller-how-current-siting-regime-stifles-renewable-energy/>

Our recommendations are tangible implementation actions that can help translate this investment into economic growth, reduced inflation, and a huge step forward in the energy sector.

Our recommendations

- ✓ Agencies should **develop and publish clear, comprehensive guidelines on available programs** to make it easier for potential consumers and companies to participate
- ✓ The DOE, state, and local governments must **streamline processes, eliminate redundancies, and reduce burdensome requirements and paperwork** where possible to fast-track project applications
- ✓ The DOE and other implementing agencies should **establish parameters to evaluate projects** that ensure the right kinds of technologies are supported and risks are reduced for overall investment
- ✓ Private technology & solution providers must **produce investment grade business cases and a sustainable business model** to access funding
- ✓ A mechanism should be established to **connect companies with viable project hosts and potential investors** to accelerate deployments
- ✓ Utilities and RTO's must **simplify, streamline, and automate interconnection processes**
- ✓ Incentives should be created for utilities/local entities to **provide opportunities for promising innovative technologies**
- ✓ **Reporting standards must be comprehensive and less burdensome** and made available to the public to encourage engagement



We believe that through a clear, comprehensive implementation framework that incentivizes market participation and encourages the development of innovative technologies, this law can transform the goal of a 50% reduction in emissions from pipedream to reality.

Implementation of the IRA will be the determining factor in the most controversial question regarding the law: will it actually reduce inflation?



About Vrinda Inc.

Vrinda Inc. is a New York-based business and technology firm. Vrinda Inc. creates success for your business through a focus on value creation by providing trusted, actionable advice, and practical solutions. We provide business and technology consulting services to the Energy, Utility, and Transportation sectors. Vrinda operates in the United States and Latin America and brings cutting edge expertise to the utility industry.



Navneet Trivedi – Co-Founder and Chief Operating Officer, Vrinda

Navneet co-founded Vrinda Inc. leveraging 30 years of international energy and utility sector experience working with 100+ utilities in 7 countries across the value chain of the utility industry. Navneet is focused on helping C-level executives in some of the largest utilities in the United States and Latin America with their pursuit of clean energy led transformation. Navneet is an electrical engineer and holds a master's degree in renewable energy systems from IIT Bombay, India, and business certification from Columbia University, New York.

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