



Will the Stars Align for a More Orderly Transition?

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Passage of the Inflation Reduction Act of 2022 (IRA) represents a watershed moment in United States climate policy. To offer perspective, MacKay Shields is publishing a series that looks at the potential impact on the environment, inflation, and corporate sectors. In this article, we find that the US approach to national climate policy differs from that of many other countries, as it relies mainly on incentives rather than the carrot-and-stick approach prevalent elsewhere. This approach, along with a heavy reliance on coordination and momentum, may pose challenges to achieving the legislation's emission reduction goals.

With passage of the IRA, the US joins the ranks of nations that have codified climate action into law and officially re-establishes itself as a credible influencer on the stage of global climate talks. Unlike many of those peers, particularly in Europe, the US has adopted an almost exclusively carrot-driven strategy, staying true to the idea that incentives and American innovation will achieve greater success than punitive course correction attempts in the overarching goal of transitioning to a low carbon economy.

The US has already been on a path of a somewhat disorderly transition, as evidenced by 71% of S&P 500 companies disclosing GHG emissions in their annual reports¹ such that the SEC earlier this year officially interjected to propose rules and requirements for standardization of such disclosures, in recognition of their growing relevance across financial markets. Perhaps with the passing of the IRA, the US may now enter a phase of more orderly transition, even if the speed of that transition may be called into question by the provisions written into the bill to shore up US energy independence and security. Ultimately, however, the biggest impact the IRA is likely to have on the investing community is an increase in momentum for further climate-related investment trends.

Emissions Reduction—A New Hope Built on Momentum

We know that actual emissions reductions can only be achieved by doing one thing: significantly reducing fossil fuel use. Based on that simplest of truths, the IRA does not directly impose any policy mechanism to achieve that goal. Naturally, that would require much more of a stick-centered approach, which is a political non-starter in the US.² Instead, extrapolation of the actions that are anticipated to be taken by corporate America as a result of the incentive structures put in place by the legislation has some groups of climate change researchers projecting significant emissions reductions stemming from electric power, carbon removal, industry, and transportation.

MACRO IMPLICATIONS

While the IRA should result in significantly lower greenhouse gas emissions over time, it is likely to have very little impact on one of its stated goals – reducing inflation.

Learn more in MacKay's IRA series from
Steven Friedman, Senior Macro Economist [\[click here\]](#)

Looking at each of these four areas of potential emissions reduction, there are key causes for concern in both their practicality for achievement and their implications for inflation. It should be noted that while there are plenty of question marks that make real-world implications unclear, there is just as much to be encouraged by in terms of understanding the clear direction towards transitioning to a low carbon economy.

Clean Power Provisions—Great for Capital Planning, but Major HELP WANTED Issues

By far the biggest takeaway for the clean power sector is the extension of tax credits across a 10-year time horizon. Moreover, if emissions reduction targets are not met by 2030, which, as we'll note shortly, is highly likely, those tax credits can be extended for another 10 years. This provision alone thereby takes an industry that has struggled with capital planning and, in turn, with attracting significant investment beyond short 1-3 year time horizons, to an entirely new ballgame. The importance of this cannot be overstated for such a capital-intensive industry.

Solar, above all, proves to be the biggest winner here, as the bill extends production tax credit provisions to this space on top of the investment tax credit they are already accustomed to receiving, allowing them to access either benefit for the first time. The implication of this mechanism is that, particularly in the environment we are in now where inflation is high, rates are rising, and traditional energy prices are high, more energy corporates may see the building out of solar as a way to hedge themselves in a meaningful way.

However, the tricky part of this provision comes into play here. Many studies are being released projecting various levels of job creation in the clean power sector, from 1.5 million new jobs created by 2030³ to 2.3 million created by 2035,⁴ as shown in the REPEAT Projects charts below, and even 900,000 new jobs created per year until 2030.⁵ This will be the biggest constraint to this element of the bill playing out as many of its proponents hope it will. There is already a labor strain on the

clean energy sector today,⁶ and though there are increased tax incentives for projects that meet certain apprenticeship requirements, the ability to find, train, and retrain the talent needed to support this anticipated growth will prove challenging.

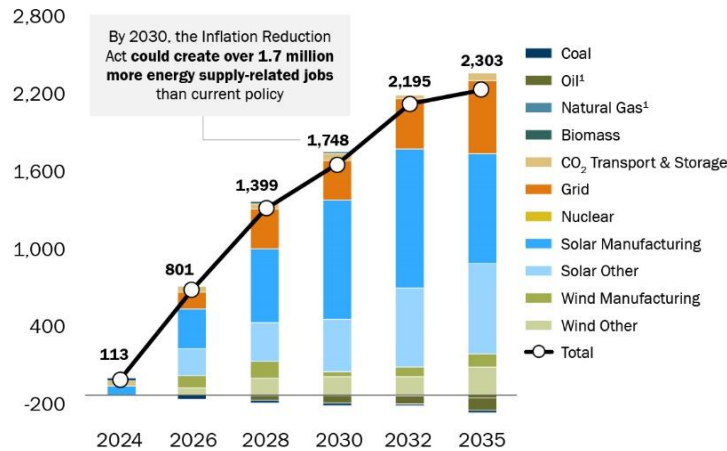
Industry and Carbon Removal

Some are dubbing this bill the “Manchin Compromise” specifically for the work done by Senator Joe Manchin to include the traditional energy sector in collective action towards the transition. The bill's provision on expanding 45Qs, which are tax credits granted to projects that capture and store carbon (commonly known as CCS), takes many small and mid-sized carbon capture projects from being unfeasible to potentially profitable. Since these types of projects are at the center of the traditional energy sector's business strategy of moving towards decarbonization, this provision is being lauded by players not known for being pleased about climate-related legislation. This is largely a good thing, considering the latest IPCC report found that negative emissions technologies are necessary to reach net zero by 2050.⁷ Aligning capitalist incentives with climate goals may be among the best ways to get there.

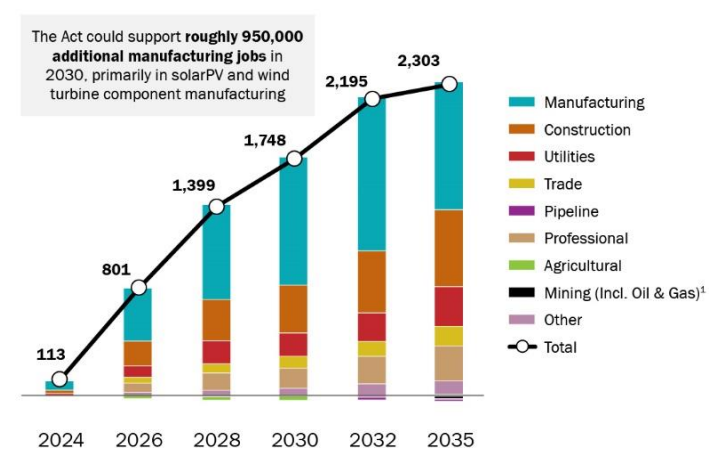
There are a couple of key concerns with getting overly excited about this particular provision, however. The first relates to the sheer scale needed to reach the ultimate goal of net zero by 2050: in order to get there, the energy sector must go from storing 40mn tCO₂e/year currently to 7.6bn tCO₂e/year by 2030, according to the IEA.⁸ This issue of scale leads us to the second concern related to this part of the bill, which is that in order for more advanced and larger carbon capture projects to be economical, like a \$100bn US Gulf Coast CCS hub being championed by ExxonMobil, carbon taxes and other initiatives would be needed. This again brings us back to the need to weigh the deficiencies of an approach that is so seemingly allergic to any climate-related ‘stick’.

FIGURE 1: CHANGE IN ENERGY SUPPLY-RELATED EMPLOYMENT VS CURRENT POLICY | INCLUDING BIPARTISAN INFRASTRUCTURE LAW

EMPLOYMENT BY RESOURCE | THOUSANDS OF JOBS



EMPLOYMENT BY SECTOR | THOUSANDS OF JOBS



1. Employment in oil and gas sectors is estimated based on the average of production under the High and Low Oil & Gas Production scenarios. Source: REPEAT Project IRA Impact Report, August 2022. Used with permission.

Autos—Made in the USA Is Great, Until You Realize You’re Missing the Key Ingredients

There has been considerable attention given to the provisions granted to the auto sector in the Inflation Reduction Act, and understandably so. There are many mechanisms in the bill to target mass adoption of EVs and bring down their “greenium”, including a cap on the retail price for individual vehicles, the lifting of production caps applied to manufacturers, and a household income limit for receiving the credit on new and used vehicles. However, and this is probably the largest however of all, the provisions aimed at protecting American industry and supply chains make the vision for EV adoption at mass scale extremely tenuous.⁹ Most notably, the provision around mineral sourcing is severely limiting. At the start of the bill’s implementation, 40% of critical minerals need to be extracted and processed in the US or a partner country with a Free Trade Agreement, and that ramps up to 80% by 2026. Currently, China hosts 80% of the world’s manufacturing facilities for lithium-ion batteries¹⁰ and has a majority market share of the Democratic Republic of Congo’s cobalt mining operations, which accounts for over 70% of the world’s mined cobalt.¹¹ To rewire this supply chain could take the remainder

of this decade, according to analysis conducted at Benchmark Mineral Intelligence, and for EV tax credits to really hit mass adoption as written in the IRA, the credits for EVs need to be extended beyond their original proposed end date of 2025 to at least 2028.¹⁰

Conclusion

While the IRA was constructed as a way to achieve dual goals of emissions reduction and energy security by reducing average costs incurred by both the consumer and propagators of green products and services, the number of stars that must align for the goals to be met from a climate perspective are plentiful. From labor supply constraints to rewiring supply chains that do not yet exist, the hope is that these sizable challenges are met with American ambition and innovation, aided by stronger incentives for green investment, production, and consumption, without the need for a framework of punitive sticks to guide collective action. These are quite a few big “ifs.” Nevertheless, at the very least, the IRA is an important step in the right direction, signaling not just long-term federal support for the transition to a low carbon economy, but the emergence of a strategy for doing so.

ENDNOTES

1. Sustainability Disclosure Practices: 2022 Edition; The Conference Board, Heidrick & Struggles, ESGAUGE
2. It is worth noting, however, that the legislation was crafted to include the categorization of GHG emissions as a pollutant under the Clean Air Act, thereby increasing the Environmental Protection Agency's ability to regulate emissions at the national level. This runs directly counter to the latest SCOTUS ruling in *WV v. EPA*, where the court determined the EPA had not been granted authority by Congress to regulate GHG emissions beyond the borders of any individual plant or utility. Though at the time of this writing there has been no executive action on behalf of the Biden administration to expand the regulatory reach of federal agencies, it very well could come to pass in the coming months.
3. Mahajan, M., Ashmoore, O., Rissman, J., Orvis, R., Gopal A., "Modeling the Inflation Reduction Act Using the Energy Policy Simulator," Energy Innovation, San Francisco, CA, August 2022
4. Jenkins, J.D., Mayfield, E.N., Farbes, J., Jones, R., Patankar, N., Xu, Q., Schivley, G., "Preliminary Report: The Climate and Energy Impacts of the Inflation Reduction Act of 2022," REPEAT Project, Princeton, NJ, August 2022
5. Pollin, R., Lala, C., Chakraborty, S., "Job Creation Estimates Through Proposed Inflation Reduction Act, Modelling Impacts of Climate, Energy and Environmental Provisions of the Bill," Political Economy Research Institute, UMASS Amherst, August 2022
6. Clean Energy Labor Supply Report, American Clean Power, 2021
7. Working Group III Contribution to the 6th Assessment Report of the Intergovernmental Panel on Climate Change, Summary for Policymakers, March 2022.
8. CCUS in Power: Tracking Progress 2021 Report, IEA.
9. Biden Administration Steps to Drive American Leadership Forward on Clean Cars and Trucks (FactSheet), August 2021.
10. "What Does the US Inflation Reduction Act Mean for the EV Battery Supply Chain?," Benchmark Mineral Intelligence, August 2022
11. Mitchell, J., "Kinshasa is already Africa's biggest city – could cobalt make it the richest?," Mining Technology, February 2022.

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