Inflation Reduction Act of 2022: Overview, Climate & jobs impacts, and 45Q Enhancements

Inflation Reduction Act Toplines

- The carbon management provisions included in the Inflation Reduction Act are ***essential*** to placing America's energy, industrial and manufacturing sectors on track to reach **net-zero emissions by 2050.**
- Combined with the incredible investments made through the IIJA, these two packages represent the nation's **largest investment in commercializing carbon management** technologies to date – providing a **critical down payment on meeting midcentury climate goals.**
- Carbon capture, removal, utilization and storage will be **integral to achieving net-zero emissions by mid-century**. To deploy these technologies at the scale needed to realize **economywide deployment of carbon management technologies**, **prioritize industrial decarbonization** and **scale infrastructure** at the rate required to meet midcentury climate goals.
- The Inflation Reduction Act **builds on early successes of 45Q,** fostering the economywide deployment of carbon management technologies. The tax credit was restructured and reauthorized in 2018 with the passage of the FUTURE Act to enable participation by industrial, direct air capture and carbon utilization projects.
- The package **helps the US maintain its global leadership position in developing and deploying carbon capture and removal,** by providing the most **far-reaching federal policy support to scale carbon management technologies in the world.**
- Though the **Inflation Reduction Act** was passed through the budget reconciliation process, this landmark bill contains broadly supported carbon management priorities drawn from bipartisan legislation introduced earlier this Congress and subsequently endorsed in President Biden's American Jobs Plan.

Climate

- In tandem with the historical investments made in the 2021 Bipartisan Infrastructure Law, the portfolio of complementary policies included in this package could deliver an estimated **13-fold scale-up of carbon management capacity** and **210-250 million metric tons in annual emissions reductions by 2035.**
- The increased federal policy support for carbon management contained in the Inflation Reduction Act can help to **reshape the energy sector** and provide a significant boost to efforts to ensure the **U.S. meets its midcentury climate targets and the Biden Administration's goal of a 50% reduction in emissions by 2030.**

- The package **reinforces the essential role carbon management must play in achieving global midcentury climate goals** while positioning our nation's industrial, energy and manufacturing sectors as **leaders in technology innovation**. To limit warming below 2°C, the IEA concludes that 15 percent of all emissions reductions to meet net zero by 2070 must come from carbon capture. Moving the net-zero goalposts from 2070 to 2050 would require 50 percent more carbon capture deployment, so scaling up this technology is integral to meeting climate goals.
- According to Princeton's REPEAT Project, carbon capture provisions account for roughly one-fifth to one-sixth of the total emissions reductions present in the package.

Jobs impact

- There is potential to create **tens of thousands and hundreds of thousands of high-wage jobs** from carbon capture and direct air capture deployment, respectively.

- A 2020 Rhodium Group jobs analysis commissioned by the Linden Trust for Conservation found that **hundreds of thousands of direct and indirect jobs could be created by the buildout of a direct air capture industry by 2050**.
    - 64,000 jobs will be created in the short-term by capital investment in carbon capture retrofit projects, with an additional 43,000 jobs created from retrofit operations.
    - Additional jobs be created from carbon capture retrofits in the long-term, Post-2035, capital investment will drive up to 78,000 jobs, and up to 53,000 jobs will also be created in this time-period from retrofit operations.
- Enhancements to the 45Q tax credit enacted through the Inflation Reduction Act will safeguard **high-wage jobs that sustain families and communities** and ensure the **long-term viability of key domestic industries** which those jobs have historically relied on.
- This historic legislation provides a critical pathway for **creating and retaining the high-wage jobs base that families and communities depend upon**, while positioning our nation's industrial, energy and manufacturing sectors for global leadership in achieving net-zero emissions by midcentury.

45Q Enhancements

- The Inflation Reduction Act contains **all of the Coalition's top tax-based priorities for the 117th Congress**, including a direct pay mechanism; multi-year extension of the commence construction window; increased credit values for industry and power projects; increased credit values for direct air capture projects; and significantly lower annual capture thresholds.
    - Together, these enhancements to the 45Q tax credit will provide investment certainty, additional incentive value and the flexibility needed to leverage greater private investment in carbon management projects.
- Commercial experience and modeling have shown that 45Q credit values restructured by the 2018 FUTURE Act are insufficient to drive the scale of early deployment needed in industry, electric power generation and direct air capture to bring costs down and reduce commercial risk.
- 45Q tax credit enhancements in the IRA will **close cost gaps** and **enable commercial deployment** of carbon management technology across key sectors, bringing costs of deploying the technology down through innovation and learning, much like what has been accomplished through deployment-focused federal policies for wind, solar and other low and zero-carbon technologies.
- Based on 2021-reported U.S. Environmental Protection Agency (EPA) data, approximately 54 percent of power plants and 75 percent of industrial facilities currently fall below annual carbon dioxide capture thresholds in the 45Q tax credit. These thresholds limited the potential universe of carbon capture, direct air capture and carbon utilization projects and the overall technology innovation and emissions reduction potential of the incentive. Thresholds arbitrarily preclude the development of many otherwise viable projects at facilities that simply lack the scale to meet those requirements. **The lower annual capture thresholds present in the package** will allow for enable more projects to qualify for the 45Q credits program, **significantly expanding the program and its benefit on the implementation of carbon capture technologies**.

Current 45Q Tax Credit Amounts		New Inflation Reduction Act 45Q Credits **Industry & Power**	New Inflation Reduction Act 45Q Credits **Direct Air Capture**
For dedicated secure geologic storage of CO2 in **saline or other formations**	$50 per ton	$85 per ton	$180 per ton
For **carbon utilization projects** to convert CO or CO2 into useful products (e.g., fuels, chemicals, products)	$35 per ton	$60 per ton	$130 per ton
For secure geologic storage of CO2 in **oil and gas fields** through enhanced oil recovery	$35 per ton	$60 per ton	$130 per ton

Current 45Q Annual Carbon Capture Thresholds in metric tons of CO_2/CO per year		**Inflation Reduction Act Enacted 45Q Reduced Annual Carbon Capture Thresholds** in metric tons of CO_2/CO per year	
Direct air capture facilities	100,000 or more	**Direct air capture facilities**	1,000 or more
Carbon utilization projects	25,000 – 500,000	**Carbon utilization projects**	Carbon utilization projects are subject to the individual project thresholds
Industrial facilities (e.g., ethanol, steel, cement, and chemicals)	100,000 or more	**Industrial facilities** (e.g., ethanol, steel, cement, and chemicals)	12,500 or more
Electric generating units (e.g., coal, natural gas and biomass-fired powered plants)	500,000 or more	**Electric generating units** (e.g., coal, natural gas and biomass-fired powered plants)	18,750 or more