JANUARY 30, 2024 Written by Dr. Siegmar Pohl

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4 KEY TAKEAWAYS

Trends in Carbon Capture Technologies and Tax Credits Under the Inflation Reduction Act

Kilpatrick's Dr. Siegmar Pohl recently spoke on a panel addressing "Trends in Carbon Capture Technologies and Tax Credits Under the Inflation Reduction Act" at the Cleantech Forum North America in San Diego. The panelists analyzed the carbon capture landscape, suggested IP strategies, and explored opportunities for financing, tax credit considerations, and EPA loan guarantees.

Dr. Pohl's key takeaways from the presentation, include:

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Carbon Capture companies may take advantage of the business and contracting opportunities created by the Regional Direct Air Capture (DAC) Hubs for which the Bipartisan Infrastructure Law and Inflation Reduction Act set aside $3.5 billion. In August 2023, the Department of Energy (DOE) selected initial two Regional DAC Hubs projects for award negotiations ($1.2 billion). They are Project Cypress (Louisiana) and South Texas DAC Hub (Kleberg County, TX) which includes an associated saline geologic CO2 storage site. DOE also announced additional projects for award negotiations, including 14 projects to explore the feasibility of a potential DAC Hub location, and 5 projects to perform feasibility and front-end engineering and design (FEED) studies.

The carbon capture industry is urgently awaiting guidance from Treasury on how broadly the Section 45Q tax credit - which had been expanded by the Inflation Reduction Act of 2022 (IRA) - will be applied to new carbon capture technologies. The amounts that can be deducted from any taxes owed (or which can be received in cash from the IRS for the first 5 years) range from $12 per metric ton if utilized commercially (to grow algae or bacteria, to produce cement or chemicals), as a tertiary injectant, or for Enhanced Oil Recovery. The amount is 5 times as much, if prevailing wages were paid in the construction of the carbon capture equipment, and if at least a portion of the labor hours were performed by apprentices. The amounts increase to up to $85 per metric ton if the carbon oxide captured is stored in a secure geological site, and it goes up to $180 per metric ton if the carbon oxide was captured directly from air (Direct Air Capture).

2

Treasury had received well over 4,500 comments from industry regarding which technologies should benefit from the credit. While gas captured in an acid gas recovery unit at a methanol facility may qualify in certain circumstances, carbon oxide from CO2 production wells at natural CO2-bearing formations or natural subsurface springs so far did not qualify.

3

circumstances, carbon oxide from CO2 production wells at natural CO2-bearing formations or natural subsurface springs so far did not qualify. Further guidance is also expected as to which methods of biologic sequestration methods (e.g., storing atmospheric carbon in vegetation, soils, woody products, and aquatic environments) will qualify. Companies have asked whether systems that are installed on motor vehicles, marine vessels, and other mobile sources can tap into the IRA funds, technologies that result in direct CO2 reduction from chemical manufacturing processes, or sequestration that occurs via geological sites. Should the production of healthy soil, in which sequestration occurs via regenerative practices be supported and would ocean carbon dioxide removal be considered as "other facilities" to receive tax credits under IRA.

An important piece to the puzzle of getting a carbon capture facility financed can be DOE and USDA loans and loan guarantees. One of the most attractive loan programs is the DOE Title XVII, Section 1703 program which currently runs until 2025. It provides direct loans from U.S. Treasury's Federal Financing Bank (FFB) backed by 100% DOE guarantees. The loans are for uncapped amounts and can run for 30 years. Interest rates are U.S. Treasury rate plus a margin and some risk fees. These loans are available for many new and unique renewable, clean fossil and nuclear technologies. E.g., Retired power plants may be replaced with: Fossil or biomass generation with carbon capture and sequestration. Just under $400 billion of senior debt authority are still available.

4

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