

## **IRC §45Q Carbon Sequestration Tax Credit Reform** **February 2018**

### **Background**

Section 45Q was enacted as part of the Energy Improvement and Extension Act of 2008 and amended by the American Recovery and Reinvestment Act of 2009. 45Q provides a credit for CO<sub>2</sub> sequestration and is available to taxpayers that capture qualified CO<sub>2</sub> at a qualified facility and dispose of the CO<sub>2</sub> in secure geological storage.

The credit is equal to:

- \$20 per metric ton for qualified CO<sub>2</sub> that is captured and disposed of in secure geological storage or
- \$10 per metric ton for qualified CO<sub>2</sub> that is captured and used as a tertiary injectant in a qualified EOR project

Qualified CO<sub>2</sub> is defined as CO<sub>2</sub> captured from an industrial source that would otherwise be emitted as an industrial emission, is measured at the source of capture, and verified at the point of disposal or injection. To qualify, an industrial facility must capture and sequester a minimum of 500,000 tons of qualified CO<sub>2</sub> during the taxable year. The program is capped and expires when 75 million tons have been claimed.

### **Challenges with Existing 45Q Program**

45Q has made little difference in capital markets and is expected to run out quickly. IRS last indicated that as of the end of 2015 about 44.6 million of the authorized 75 million tons have already been claimed by several industrial CO<sub>2</sub> capture projects. Credits are claimed on an annual basis, so it is not clear how many tons of credits were claimed in 2016.

CCS is currently a very expensive technology. The \$10 per ton credit for EOR and \$20 per ton credit for geologic storage continue to be insufficient to stimulate financing of CO<sub>2</sub> capture projects. In addition, financial uncertainty is created by a cap because it is unknown if any credits will be available when a CCUS project begins operating to capture and permanently sequester CO<sub>2</sub>, and therefore, the credits do not provide access to commercial capital necessary for a project to reach financial close.

The following changes to the program could be helpful to address these issues:

- **Remove the Cap.** Eliminating the cap would alleviate the uncertainty that undermines project financing. The assurance that the credit will be available for a certain period of eligibility for individual projects is necessary for securing private sector investment.
- **Increase the tax credit value.** To drive private investment and bring down the costs of CO<sub>2</sub> capture, a higher tax credit value is needed for coal-based CO<sub>2</sub> capture projects. In addition, since the CO<sub>2</sub> price is linked to oil prices and oil prices continue to decline, a minimum of \$30 per ton of CO<sub>2</sub> utilized and permanently stored through EOR is needed for coal-based power plant projects.

- Clarify the eligibility criteria. The current 45Q tax credit excludes certain CO<sub>2</sub> capture business models and includes other restrictive provisions. For example, the party capturing CO<sub>2</sub> should not also have to own the facility where CO<sub>2</sub> capture equipment is installed to be eligible for the credit. This should be corrected.
- Address a potential lack of tax appetite. CO<sub>2</sub> capture projects are likely to have high debt interest payments and large tax depreciation deductions that diminish tax liability and the ability to claim the full value of a tax credit for a number of years. Further, certain entities developing capture projects, such as electric cooperatives or municipalities, may not be taxpaying companies as they are cooperatively owned and operated. Making the credit refundable or assignable to another entity with tax appetite is essential for an incentive to be effective to address this lack of tax appetite.

In the 115<sup>th</sup> Congress, legislation has been introduced in both the House and Senate that proposes changes to the 45Q tax credit in order to address these issues.

Senators Heitkamp (D-ND), Whitehouse (D-DE), Capito (R-WV) and Barrasso (R-WY) introduced S. 1535, the Furthering carbon capture, Utilization, Technology, Underground storage, and Reduced Emissions Act ([FUTURE Act](#)), which has 24 bipartisan cosponsors. The legislation would remove the cap for new projects, make the credit available for a 12-year period to projects that begin construction before 2024, and increase the credit for EOR to \$35/ton and to \$50/ton for geologic storage, with both credits escalating to that value from date of enactment over a 10 year period. It also adds a new tax credit category of \$35/ton of CO<sub>2</sub> used in applications other than EOR, i.e. converted to other byproducts. This bill proposes to clarify the eligibility criteria and make the credit assignable to other entities involved in the project. It also allows for facilities placed in service prior to enactment of the Act to qualify for the increased credit value in certain circumstances.

Congressman Michael Conaway (R-TX) and 49 Republican and Democratic cosponsors introduced H.R. 3761, the [Carbon Capture Act](#), that is very similar to the language in S.1535. The bill would increase the value of the Section 45Q tax credit to \$35 over 9 years for all uses, provide the credit for a 15-year period to new projects that begin construction before 2024, incorporate the needs of different technologies and business models, improve the transferability of the credit, fully incorporate utilization beyond enhanced oil recovery, and allow facilities placed in service prior to enactment of the Act to qualify for the increased credit value in certain circumstances.