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Rev. Rul. 2021-13: Credit for carbon oxide sequestration under section 45Q

The IRS today released an advance version of Rev. Rul. 2021-13 that clarifies several issues arising out of the section 45Q regulations (January 2021).*

Rev. Rul. 2021-13 [PDF 88 KB] clarifies:

- Whether dual purpose property could be excluded from the definition of carbon capture equipment
- Whether only one owner was permitted for each single process train of carbon capture equipment
- What the relevant placed-in-service date is for each single process train of carbon capture equipment for section 45Q purposes

*Read KPMG's **January 2021 report** [PDF 3.8 MB] that includes an overview of the final regulations regarding carbon oxide sequestration credit under section 45Q.

Background

The facts presented in the revenue ruling involve Facility X, a methanol plant, that produces methanol from petroleum coke in a multistep industrial process.

The production process includes the following steps:

- First, the petroleum coke is gasified with very high temperature steam to create a raw synthesis gas (syngas). The raw syngas is a mixture of several components including carbon monoxide, carbon dioxide (CO2), methane, hydrogen, and hydrogen sulfide.
- Second, particulate matter and some sulfur is removed from the raw syngas.
- Third, the raw syngas is purified in an acid gas removal (AGR) unit.
- Fourth, the purified syngas—comprised of carbon monoxide, hydrogen, and methane—is converted into methanol in the methanol unit.

The revenue ruling explains that:

- An AGR unit is commonly installed at any industrial facility that processes "sour gas" (that is, gas containing CO2 and/or hydrogen sulfide) such as syngas from gasification of coal or coke and natural gas produced from certain deposits. The specific design of an AGR unit is based on the nature of the input gases and the desired final product of a particular industrial facility.

- A methanol unit installed at an industrial facility requires the input syngas to be of high purity and the proportions of the syngas components to be within certain ranges.

- An AGR unit installed at that industrial facility removes the unwanted components, including CO2, from the raw syngas stream with a process that uses chilled methanol as a physical solvent at low temperatures to absorb and then separate the gas constituents to specification.

- At the completion of the purification process, nearly all hydrogen sulfide has been isolated, and CO2 is either released into the atmosphere or captured.

Specifically concerning Facility X:

- The AGR unit was placed in service on January 1, 2017, for purposes of sections 167 and 168.

- Since January 1, 2017, the CO2 separated by this AGR unit has been released into the atmosphere, and no taxpayer has claimed a section 45Q credit regarding Facility X.

- In 2021, Investor purchased and installed new components of carbon capture equipment necessary to create a single process train capable of capturing, processing, and preparing for transport the CO2 that was being released into the atmosphere at Facility X. Investor did not acquire an ownership interest in the AGR unit or Facility X.

Issues presented in Rev. Rul. 2021-13

- For purposes of section 45Q(a), is the acid gas removal unit at Facility X carbon capture equipment within the meaning of Reg. section 1.45Q-2(c)?

- Is Investor required to own every component of carbon capture equipment within a single process train at Facility X to be the person to whom the credit under section 45Q(a) (section 45Q credit) is attributable under Reg. section 1.45Q-1(h)?

- For purposes of section 45Q(a), what is the original placed-in-service date of the single process train of carbon capture equipment at Facility X that includes the existing acid gas removal unit and new components of carbon capture equipment?

- How, if at all, does the original placed-in-service date of the single process train affect the placed-in-service date of the existing acid gas removal unit for depreciation purposes under sections 167 and 168?

Conclusion of Rev. Rul. 2021-13

The IRS answered the four questions in the revenue ruling, as follows:

- For purposes of section 45Q(a), the acid gas removal unit at Facility X is carbon capture equipment within the meaning of Reg. section 1.45Q-2(c).

- Investor is not required to own every component of carbon capture equipment within a single process train at Facility X to be the person to whom the section 45Q credit is attributable under Reg. section 1.45Q-1(h). However, Investor must own at least one component of carbon capture equipment in the single process train of carbon capture equipment at Facility X.

- For purposes of section 45Q(a) only, the original placed-in-service date of a single process train of carbon capture equipment at Facility X that includes the existing acid gas removal unit and new components of carbon capture equipment is the date that the single process train is placed in a condition or state of readiness and availability for the capture, processing, and preparation of carbon oxide for transport for disposal, injection, or utilization. Under the facts provided, this means that the placed-in-service date of the single process train would be 2021.

- The original placed-in-service date of the single process train for purposes of section 45Q has no effect on the placed-in-service date of the existing acid gas removal unit or new components of carbon capture equipment for depreciation purposes under sections 167 and 168, although the placed-in-service date of the new components of carbon capture equipment for depreciation purposes under sections 167 and 168 may be the same date as the original placed-in-service date of the single process train for purposes of section 45Q.

KPMG observation

Rev. Rul. 2021-13 clarifies that taxpayers are not allowed to elect to exclude "dual purpose" property from the definition of carbon capture equipment. The final regulations provide a functionality-based definition of carbon capture equipment. The revenue ruling makes clear that, because **one** of the functions of the AGR system is to separate CO2 from a gas stream, it is carbon capture equipment for purposes of section 45Q.

The final regulations provide that for each single process train of carbon capture equipment, only one taxpayer will be considered the person to whom the credit is attributable under Reg. section 1.45Q-1(h)(1)(ii). The revenue ruling clarifies, though, that one person is not required to own every component of carbon capture equipment within a single process train; however, to be the person to whom the section 45Q credit is attributable, a person must own at least one component of the carbon capture equipment in the single process train.

Further, the Rev. Rul. 2021-13 clarifies that the relevant placed-in-service date for section 45Q purposes is the placed-in-service date of the single process train of carbon capture equipment, regardless if certain assets within that single process train have a different placed-in-service date for depreciation purposes.

Conclusion

Rev. Rul. 2021-13 provides helpful clarity on certain fact patterns in which a taxpayer installs new carbon capture equipment on older gas processing facilities owned by third parties. Many of these facilities contained existing AGR systems, and questions have arisen about whether those systems frustrated the ownership and the placed-in-service date of the carbon capture equipment such that the taxpayer's eligibility for section 45Q credit for the new equipment was uncertain. Tax professionals believe that the clarification in today's guidance should address these questions.

Rev. Rul. 2021-13 also provides some additional insight on the components of an "independently functioning process train" for purposes identifying a unit of carbon capture equipment. This could be helpful, in particular, for taxpayers seeking to retrofit an older system and treat it as a newly placed-in-service unit of carbon capture equipment under the "80/20" test.

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