

---

# Economic Incentives for CCUS under the Inflation Reduction Act

**Jason R. Eisenberg**  
August 29, 2023

Congress enacted the Inflation Reduction Act of 2022 (“IRA”), which the President signed into law on August 16, 2022.

- Tax credits and incentives originally estimated by Joint Committee on Taxation at \$270 billion but more recently revised at over \$660 billion.
- Gamechanger legislation. Supercharging energy tax credits across multiple pathways including manufacturing, development, and end use.
- Among other things, the IRA includes first time tax incentives for energy resources such as clean hydrogen production and new methods of tax credit monetization in the form of elective payments and tax credit transfers (i.e., sale of tax credits).

- IRA has clear focus on decarbonization.
- In addition to 45Q, and IRA provides tax credits for technologies that will utilize carbon capture technology.
  - Section 45Q Carbon Capture Tax Credit – modified and extended
  - Section 45V Clean Hydrogen Tax Credit – new provision
  - Section 45Z Clean Fuel Tax Credit – new provision
- **New Tax Credit Features**
  - Prevailing wage and apprenticeship (“PWA”) – Davis-Bacon Act
  - Lifecycle GHG emissions rate – GREET model.

# Section 45Q Carbon Capture Credit

- IRA amendments to Section 45Q credit generally apply to facilities or equipment placed in service after December 31, 2022 (provided that amendments to the capture requirements apply to facilities or carbon capture equipment the construction of which begins after the date of enactment).
- The minimum carbon capture requirements were reduced and an efficiency requirement was added for electric generating facilities –
  - An electricity generating facility must capture not less than 18,750 metric tons of qualified carbon oxide during the taxable year and carbon capture equipment for the “applicable electric generating unit” must have a capture design capacity of not less than 75 percent of the “baseline carbon oxide production”.
  - A direct air capture facility must capture at least 1,000 metric tons per taxable year and,
  - In the case of any other facility, qualified facilities must capture not less than 12,500 metric tons of qualified carbon oxide during the taxable year.
- Beginning of construction date was extended from December 31, 2025 to December 31, 2032.
- Credit rate amounts increased significantly (depends on meeting labor requirements):
  - EOR – base rate of \$12/metric ton to PWA rate of \$60/metric ton
  - Sequestration – base rate of \$17/metric ton to PWA rate of \$85/metric ton
  - Direct air capture (utilization or use in EOR) – base rate of \$26/metric ton to PWA rate of \$130/metric ton
  - Direct air capture (sequestration) – base rate of \$36/metric ton to PWA rate of \$180/metric ton

# Section 45Z Clean Fuel Production Credit

- New tax credit for the production and sale of certain transportation fuels that satisfy certain emissions requirements.
- “Transportation fuel” means a fuel which –
  - is suitable for use as a fuel in a highway vehicle or aircraft,
  - has an emissions rate which is not greater than 50 kg of CO<sub>2</sub>e/MMBTU, and
  - is not derived from coprocessing an applicable material (or materials derived from an applicable material) with feedstock which is not biomass.
- Section 45Z credit is only available for transportation fuel produced at a qualifying facility after December 31, 2024 and sold to an unrelated person for qualifying uses on or by December 31, 2027. Fuel sold after December 31, 2027 will not qualify.
  - A qualifying facility is – a facility used for the production of transportation fuels, and does not include a single facility that is already claiming credits under sections 45V (clean hydrogen), 48(a)(15) (ITC in lieu of PTC for 45V facilities) or 45Q (carbon oxide sequestration)
  - Transportation fuel must be sold to an unrelated person during the taxable year – (1) for use by such person in the production of a fuel mixture, (2) for use by such person in a trade or business, or (3) who sells such fuel at retail to another person and places such fuel in the fuel tank of such other person.
- Section 45Z credit amount is based on lifecycle GHG emissions – GREET model
  - Base credit of \$0.2 per gallon multiplied by the “emissions factor” (an amount equal to equal to 50 kg of CO<sub>2</sub>e/MMBtu minus the emissions rate for such fuel, divided by 50 kg of CO<sub>2</sub>e/MMBtu (and rounded to the nearest multiple of 0.1)
  - Base increases to \$1 per gallon if PWA labor requirements satisfied

# Section 45V Hydrogen PTC

- New PTC and ITC for production of qualified clean hydrogen.
- Begins construction before January 1, 2033; 10-year credit period from PIS date.
- Qualified clean hydrogen based on lifecycle GHG emissions – GREET model
  - Not greater than 4 kilograms of CO<sub>2</sub>e per kilogram of hydrogen
  - Base credit of \$0.60 per kilogram multiplied by “applicable percentage” – 4 tiers of credit amounts
  - 100% if lifecycle GHG emissions less than 0.45 kgs of CO<sub>2</sub>e per kg of hydrogen
  - Up to \$3.00 per kilogram if PWA labor requirements satisfied
  - Only lifecycle GHG emissions through the point of production (well-to-gate)
- Key issues:
  - Definition of the “facility”
- No credit if 45Q credit “allowed” to any taxpayer for taxable year or any prior taxable year.

- Direct payment or “elective payment” (after Dec. 31, 2022)
  - Section 6417 of the Code.
  - Tax-exempt and government entities – all eligible credits.
  - Taxable entities – only Section 45Q, 45V, and 45X credits.
  - Similar to a grant or refundable tax credit.
- Transferability – taxpayers may sell tax credits (after Dec. 31, 2022)
  - Section 6418 of the Code.
  - Eligible credits including PTCs and ITCs, 45Q, 45V, other credits.
  - Transferor taxpayer sells eligible credits to transferee taxpayer(s) for cash.
  - Transferee then treated as the taxpayer.
  - Not treated as income to transferor; no deduction to transferee for cash payment.

- On June 14, 2023, Treasury and IRS issued proposed regulations regarding the direct payment election under Section 6417.
  - 108 pages with detailed preamble explaining provisions and proposed regulations.
  - Comments due August 14, 2023 with public hearing scheduled for August 24, 2023.
- On June 14, 2023, Treasury and IRS issued proposed regulations regarding the transfer of eligible credits under Section 6418.
  - 108 pages with detailed preamble explaining provisions and proposed regulations.
  - Comments due August 14, 2023 with public hearing scheduled for August 21, 2023.
- On June 14, 2023, Treasury and IRS issued temporary regulations regarding the pre-filing registration requirements for the direct payment election and the transfer election.
- Additional IRS guidance expected. Final regulations in late 2024 or 2025.



- Direct payment is available only for a 5-year period with respect to carbon capture equipment under § 45Q and clean hydrogen production facilities under § 45V. One five-year period per applicable credit property
- Taxpayers generally will elect direct pay for first 5 years, then transfer § 45Q or 45V credits in subsequent tax years through end of credit period.
- General considerations on direct payment and credit transfers:
  - Timing of direct payment uncertain. Financing alternatives?
  - Discount on tax credit transfers?
  - Volume of tax credits at peak. Too many credits to sell?
  - Domestic content requirements for direct pay and § 45 credits for tax-exempt entities.

# Direct Payment – General Rules

- Applicable entity or electing taxpayer treated as making a payment against federal income tax (for the taxable year with respect to which such credit was determined) equal to the amount of the eligible credit.
- Election generally must be made no later than the due date (including extensions) for the tax return for the taxable year for which the election is made.
- Payment generally is treated as made on the later of the due date (determined w/out regard to extensions) of the tax return for the taxable year or the date it is filed.
- Election is made on the applicable entity's or electing taxpayer's annual tax return.
  - Proposed regulations require the election to be made on the original tax return filed not later than the due date (including extensions).
- Once made, the direct payment is irrevocable with respect to any applicable credit for the taxable year for which the election is made.
- Election applies to the entire amount of the applicable credit(s) determined with respect to each applicable credit property.
  - Not clear taxpayers may “split” credits – i.e., elect direct payment on portion + transfer remaining portion.
  - Credit includes the applicable credit + bonus credits for applicable credit property.
- Credits reduced to zero to prevent double benefit.

- Section 6417(d)(5) provides:

“As a condition of, and prior to, any amount being treated as a payment which is made by an applicable entity under subsection (a), the Secretary may require such information or registration as the Secretary deems necessary for purposes of preventing duplication, fraud, improper payments, or excessive payments under this section.”
- Pre-filing registration requirements must be satisfied as a condition of, and prior to, making the direct payment election.
- Ineligible to make election without valid registration number for the “applicable credit property” + provided on Form 3800 attached to tax return.
- On the other hand, proposed regulations warn that completion of pre-filing registration requirements and receipt of registration number would not, by itself, mean that the applicable entity or taxpayer would receive payment.

- Pre-filing registration requirements:
  - Complete pre-filing process through IRS electronic portal
  - Satisfy registration requirements and receive registration number prior to making election on tax return
  - Obtain registration number for each applicable credit property
  - Provide specific information required to be provided as part of the pre-filing registration process – e.g., information about taxpayer, credits, and applicable credit property.
    - “Any other information the IRS deems necessary for purposes of preventing duplication, fraud, improper payments, or excessive payments under this section that is provided in guidance.”
- IRS will review the information provided and will issue a separate registration number for each applicable credit property for which the applicable entity or electing taxpayer provided “sufficient verifiable information.”
- Registration number is valid only for the taxable year for which it is obtained.
  - PTCs? Must renew the registration each year.

# Direct Payment – Excessive Payments

- An additional 20% penalty may apply in situations involving direct payments in excess of the amount of the credit that would have otherwise been allowable.
- Situations where may apply:
  - Improperly claimed bonus credit amount
  - Error in calculating a credit
  - Inflated basis
  - Failure to apply the Section 38(d) ordering rules
  - Misapplication of the credit utilization rules
- Subject to “reasonable cause” – not defined in proposed regulations.
- Proposed regulations indicate that the excessive payment + penalty is applied in the year the determination of the excessive payment is made, despite the fact that this is a later year than the year the credit was allowable.

- Taxpayers have the option to transfer certain tax credits to an unrelated taxpayer in exchange for cash consideration, i.e., sell the tax credits.
- The election is available for most tax credits, including the current and tech-neutral PTCs and ITCs, § 45Q carbon capture, § 45V clean hydrogen, etc.
- Consideration for a transfer must be paid in cash, is not included in transferor's income, and is not deductible by the transferee.
  - Cash = US dollars in immediately available funds (various forms)
  - Must be paid with period beginning on the first day of the transferor's taxable year during which a specified credit portion is determined and ending on the due date for completing a transfer election statement (i.e., the earlier of the filing the relevant transferor or transferee return).
  - Proposed regulations clarify –
    - Discount is not taxable income to the transferee when credit is used.
    - Advanced commitments permitted *but* ... within the time period specified above.

# Transferability – General Rules

- Transfer election is made on a facility-by-facility basis and for each year during the credit period (for credits available over an extended period).
  - For § 45Q carbon capture credit, transfer election would need to be made for each unit of carbon capture equipment (i.e., each single process train).
- Only one transfer permitted.
  - Transferee cannot further transfer the transferred credit.
  - No “chain” transfers.
- Taxpayer cannot transfer credit carrybacks or carryforwards. Transferee taxpayer can carryback or carryforward the transferred credits.

# Transferability – General Rules

- Taxpayers may use a portion of the credits, and then transfer the rest.
- Taxpayers may transfer the credits to multiple transferees.
- However, taxpayers cannot “split” the credits between the base credit and the increased credit amounts and bonus credits –
  - E.g., PWA increased credit amounts, domestic content bonus credit, and energy community bonus credit cannot be separately transferred.
  - The portion of the credit transferred must reflect a proportionate share of the base, increased, and bonus credit amounts.
- The election must be made no later than the due date for the tax return for the year in which the transferred credit was originally determined. Election is irrevocable.
- Election is not allowed if credit would not be permitted to transferor taxpayer (e.g., tax ownership, not in trade or business, etc.)
- Recapture - Transferee taxpayer also responsible for any recapture under §45Q(f)(4) and Treas. Reg. § 1.45Q-5 – carbon oxide ceases to be disposed of or used as tertiary injectant.



# Contact Information



**Jason R. Eisenberg**

**Associate**

**New York**

[jeisenberg@HuntonAK.com](mailto:jeisenberg@HuntonAK.com)

+1 212 309 1178 direct