



TaxNewsFlash

United States

No. 2026-056
March 4, 2026

KPMG report: Biomass under sections 45Y and 48E

The Inflation Reduction Act enacted the section 45Y clean electricity production credit (PTC) and section 48E clean electricity investment credit (ITC). In contrast to the sections 45 and 48 tax credits, the sections 45Y and 48E tax credits are “technology neutral”—meaning that they are available to taxpayers that place in service qualified facilities of nearly any type—including facilities that generate electricity with gas captured from biomass or gasified biomass as a feedstock, so long as the facility is determined to have a greenhouse gas (GHG) emissions rate of zero, or less.

Sections 45Y and 48E are *generally* available to “qualified facilities” that begin construction prior to December 31, 2035, with a reduced credit benefit for projects that begin construction after 2033. (See *also*: OBBBA changes, below.)

Taxpayers may only opt for one of the sections 45Y PTC and 48E ITC.

Factors affecting credit rate

Section 48E provides for a base credit rate of 6%. The credit rate may be increased:

- To 30% (5x multiplier) if prevailing wage and apprenticeship (PWA) requirements are satisfied, or in the case of facility with a net output <1MW
- By 2% (or 10% if the PWA requirements are met) if placed in service within certain census tracts
- By 2% (or 10% if the PWA requirements are met) if produced with sufficient U.S.-domestic-produced components

Section 45Y provides for a base credit rate per kilowatt-hour (kWh) of electricity produced and sold of \$0.003, which may be increased to \$0.015 if PWA requirements are met, or in the case of a facility with a net output <1MW. These rates are subject to an annual inflation adjustment. For 2025, the base credit rate was \$0.006, once adjusted.

Biomass facilities

A facility that generates electricity through the combustion or gasification of biomass is generally qualified as a combustion and gasification facility (C&G facility) under sections 45Y and 48E.

This may include facilities that produce electricity by combusting biogas containing methane that is generated from the anaerobic decomposition of organic matter, including, but not limited to, the following:

- Landfills
- Wastewater treatment
- Anaerobic digestion systems (e.g., manure digesters)

In these cases, the electricity-generating unit (e.g., engine or turbine) that combusts the biogas is typically treated as the relevant C&G facility.

Electricity may also be generated from the combustion and gasification of solid biomass feedstocks such as woody biomass, which typically falls within the C&G category.

KPMG observation

Unlike former section 48, section 48E provides that qualified biogas facilities only include power-generation equipment and do not include related components, such as anaerobic digesters. This reduces the potential ITC benefit and may make the PTC more lucrative.

GHG emissions for a C&G facility equal the **net rate of** GHG emissions from the production of electricity into the atmosphere by such facility (taking into account lifecycle GHG emissions) as verified by a Lifecycle Analysis (considering alternative fates).

KPMG observation

Taxpayers are required to maintain certain documentation regarding the source of biomass-derived feedstocks used at a qualified facility to ensure that C&G facilities that utilize biomass feedstocks meet the statutory net-zero GHG emissions rate.

One Big Beautiful Bill Act (OBBBA) changes

- Most technologies under sections 45Y and 48E—including biogas—retain the 2034-2035 phaseout. However, OBBBA accelerated this phaseout for two specific technologies: wind and solar.
- OBBBA added “prohibited foreign entity” (PFE) restrictions and related “material assistance” rules to sections 45Y, 48E, and 7701. These rules disallow a credit benefit for any sections 45Y or 48E qualified facility if the credit claimant is a PFE, or if the facility was constructed with material assistance from a PFE for facilities that begin construction *in a tax year opening after July 4, 2025*.
 - PFEs include specified foreign entities and foreign-influenced entities. Rules for classifying entities are complex and generally target entities connected with China, North Korea, Iran, and Russia based on legal structure, ownership, debt issuance, or applicable payments that may confer effective control to such nations.
 - Material assistance for a biogas facility under sections 45Y or 48E is measured as the portion of total direct costs attributable to all manufactured products and components incorporated into a qualified facility, relative to a statutory threshold.

KPMG observation

Taxpayers that place in service otherwise eligible qualified facilities may need to consider their sourcing of materials and any relationships or transactions that could trigger PFE or material assistance compliance issues.

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