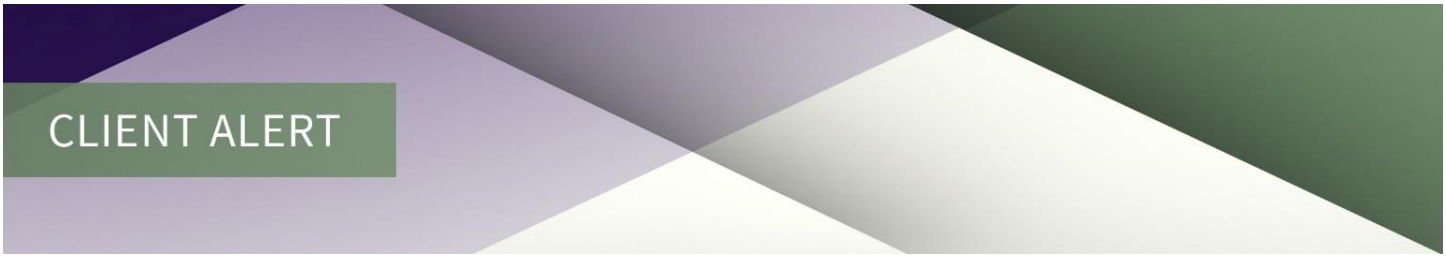

Tax Credit Opportunities for Nuclear Energy

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For previous alerts in this series on nuclear energy, please see: Another Nuclear Renaissance, Nuclear Energy — Growth and Transactional Opportunities, and Financing Nuclear Projects in the U.S. — Considerations in the Current Market Environment.

An important and significant portion of the capital stack that should not be overlooked when considering financing plans for new nuclear projects (and additional capital opportunities for operating projects) are the tax credits created by the Inflation Reduction Act (the "IRA").

We summarize these tax credit opportunities below, starting with credits that are available for existing, operating plants. Note that this alert concludes with an annex that summarizes the key features of each of the available credits.

I. Section 45U — Zero-Emission Nuclear Power Production Credit

Section 45U of the Internal Revenue Code of 1986, as amended (the "Code") provides a zero-emission nuclear power production credit (the "45U PTC") for electricity produced at a qualified nuclear power facility and sold to an unrelated person in tax years beginning after December 31, 2023 and before January 1, 2033. Notably, this credit is available only to nuclear facilities that were placed in service before August 16, 2022. The 45U PTC base credit amount is 0.3 cents/kWh of electricity produced and is increased by five times if certain prevailing wage requirements are satisfied. The 45U PTC credit amount is subject to reduction based on the facility's total energy output and gross receipts, which includes payments from other federal, state, or local zero-emission credit programs.

II. Section 45V — The Potential for Pink Hydrogen

Section 45V of the Code provides a clean hydrogen production credit (the "45V PTC"). While not a nuclear tax credit, it has the potential to unlock the future of nuclear-produced hydrogen ("pink hydrogen"). The 45V PTC is unique from other tax credits in that it utilizes a sliding scale that increases the credit amount as the carbon intensity of the production process decreases. This sliding scale looks at the "well-to-gate Emissions" of the project, making hydrogen produced via electrolysis powered by carbon-neutral energy sources such as nuclear, wind, and solar eligible for the highest credit amount.

For further information concerning Section 45V of the Code, please review Willkie's December 2023 client alert: Treasury and the IRS Issue Proposed Regulations under Code Section 45V Relating to Clean Hydrogen Production.

III. Section 45Y — Clean Electricity Production Tax Credit

Section 45Y of the Code provides a technology-neutral production tax credit (the "45Y PTC") for electricity produced at a qualified facility that replaces the Code Section 45 PTC. The 45Y PTC base credit amount is 0.3 cents/kWh of electricity produced by the taxpayer at a qualified facility and sold by the taxpayer to an unrelated person during the taxable year. The 45Y PTC base credit amount is increased to 1.5 cents/kWh of electricity produced if certain requirements are satisfied. The 45Y PTC applies for 10 years to qualified facilities placed in service after December 31, 2024. The 45Y PTC has a phase-out beginning at the later of (a) 2032 or (b) when U.S. greenhouse gas emissions from electricity are 25% of 2022 or lower.

IV. Section 48E — Clean Electricity Investment Tax Credit

Section 48E of the Code provides a technology-neutral credit (the "48E ITC") for investment in qualified facilities that generate clean electricity. The base 48E ITC is 6% of the qualified investment. The 48E ITC base credit amount is increased by five times for projects meeting the prevailing wage and apprenticeship requirements. The 48E ITC applies to facilities placed in service after December 31, 2024 and includes a phase-out starting at the later of (a) 2032, or (b) when U.S. greenhouse gas emissions from electricity are 25% of 2022 or lower. This credit replaces the general investment tax credit under Section 48 of the Code.

V. High-Assay Low-Enriched Uranium Funding

As the IRA directed, the Department of Energy ("DOE") earmarked $700 million for development of a domestic market and production of high-assay low-enriched uranium ("HALEU") available, the funding of which is available through September 30, 2026.[1] Newer nuclear technologies, like small modular reactors, require the uranium fuel produced through the HALEU process. The DOE projects that more than 40 metric tons of HALEU will be necessary by 2030, in order to bring online a new, expected fleet of advanced reactors online.[2]

[1] https://www.energy.gov/ne/haleu-availability-program.

[2] https://www.energy.gov/ne/articles/what-high-assay-low-enriched-uranium-haleu

Nuclear Tax Credits Annex

Code	Tax Mechanism	Direct Pay Eligibility	Base Credit	Bonus Credit	Transferability	Stackability	Energy Community Bonus	Period of Availability
Section 45U	PTC	Yes, for an applicable entity	0.3 cents/kWh (subject to adjustment for inflation)	5 times the base credit	Yes	Not stackable with 45J or ITC credits	No	12/31/23-12/31/32
Section 45Y	PTC	Yes, for an applicable entity	0.3 cents/kWh (subject to adjustment for inflation)	5 times the base credit	Yes	Not stackable with ITC credits	Yes	Facilities placed in service after 12/31/24. Phase-out starts the later of (a) 2032 or (b) when U.S. GHGs from electricity are 25% of 2022 emissions or lower.
Section 48E	ITC	Yes, for an applicable entity	6% of the qualified investment	5 times the base credit	Yes	Not stackable with PTC credits	Yes	Facilities placed in service after 12/31/24. Phase-out starts at the latter of (a) 2032, or (b) when U.S. GHG emissions from electricity are 25% of 2022 or lower.

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