

# RATH YOUNG PIGNATELLI

## Federal Tax Benefits for Certain New Renewable Energy Projects

(Updated to reflect the Consolidated Appropriations Act, 2021)

Eligible Project	Depreciation <sup>1</sup>	Section 45 PTC <sup>2</sup>	Section 48 ITC		
	Recovery Period	Credit Rate <sup>3</sup>	Rate <sup>4</sup>	Construction Begins Before <sup>5</sup>	Placement in Service Deadline
Wind (any)	5	1.5 cents/kWh	30% <sup>6</sup>	1/1/2022	none
Small Wind (<=100 kW capacity)	5	1.5 cents/kWh	30% <sup>7</sup>	1/1/2024 <sup>7</sup>	12/31/2025 <sup>7</sup>
Offshore Wind <sup>8</sup>	5	1.5 cents/kWh	30%	1/1/2026	none
Solar (not Fiber-Optic)	5	N/A	30% <sup>9</sup>	n/a <sup>9</sup>	none <sup>9</sup>
Fiber-Optic Distributed Sunlight	5	N/A	30% <sup>7</sup>	1/1/2024 <sup>7</sup>	12/31/2025 <sup>7</sup>
Closed-Loop Biomass	5/20	2.5 cents/kWh	30%	1/1/2022	none
Open-Loop Biomass <sup>10</sup>	5/20	1.3 cents/kWh	30%	1/1/2022	none
Geothermal (electric only)	5	2.5 cents/kWh	30%	1/1/2022	none
Geothermal (not heat pump)	5	N/A	10%	n/a	none
Geothermal Heat Pump	5	N/A	10%	1/1/2024	none
Landfill Gas	7/15	1.3 cents/kWh	30%	1/1/2022	none
Trash	7/15/20	1.3 cents/kWh	30%	1/1/2022	none
Incremental Hydropower <sup>11</sup>	20	1.3 cents/kWh	30%	1/1/2022	none
Nonhydroelectric Dam Hydropower <sup>12</sup>	20	1.3 cents/kWh	30%	1/1/2022	none
Marine and Hydrokinetic <sup>13</sup>	20	1.3 cents/kWh	30%	1/1/2022	none
Microturbine <sup>14</sup>	5	N/A	10% <sup>15</sup>	1/1/2024	none
Combined heat and power (CHP) <sup>16</sup>	5	N/A	10% <sup>17</sup>	1/1/2024	none
Fuel Cell <sup>18</sup>	5	N/A	30% <sup>7,19</sup>	1/1/2024 <sup>7</sup>	12/31/2025 <sup>7</sup>
Waste Energy <sup>20</sup>	5	N/A	30%	1/1/2024 <sup>7</sup>	12/31/2025 <sup>7</sup>

### Notes

1. Depreciable basis is reduced by 50% of the amount of any Investment Tax Credit ("ITC") claimed. 100% bonus depreciation is available for property acquired after September 27, 2017 and placed in service before January 1, 2023. Bonus depreciation for property acquired after September 27, 2017 is 80% if placed in service in 2023, 60% if placed in service in 2024, 40% if placed in service in 2025, or 20% if placed in service in 2026.

2. Wind, closed-loop biomass, open-loop biomass, geothermal electric, landfill gas, trash, incremental hydropower, nonhydroelectric dam hydropower, and marine and hydrokinetic projects that begin construction before January 1, 2022 are eligible for the Production Tax Credit ("PTC") for electricity produced and sold during the first 10 years after the project is placed in service. A taxpayer may not claim both the PTC and ITC for the same project.

3. The PTC is allowed on a per-kWh hour basis. The credit rate is adjusted for inflation each year, and the amounts shown here are for electricity produced and sold in 2020. Closed-loop biomass and geothermal-electric projects are eligible for the full credit rate. Wind projects are eligible for 60% of the full credit rate, and other projects are eligible for 50% of the full credit rate. The PTC credit rate is reduced for any project that uses tax-exempt bonds, subsidized energy financing, government grants, or other credits, except that no such reduction applies to certain closed-loop biomass projects that are modified to co-fire with coal, with other biomass, or with both, if the modification is approved under the Biomass Power for Rural Development Programs or is part of a pilot project of the Commodity Credit Corporation as described in 65 Fed. Reg. 63052)

4. The ITC is allowed for the stated percentage of the basis of "energy property" included in the project. Energy property generally includes all components integral to the production of energy up to the transmission stage.

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5. There are two methods to begin construction -- performing physical work of a significant nature (the "physical work test") or incurring at least 5% of total project costs (the "5% test"). If one of these tests is met, the taxpayer must thereafter maintain a continuous program of construction under the physical work test or continuous efforts to advance completion under the 5% test (the "continuity requirement"). If a taxpayer has met one of the begun construction tests and places a project in service no later than December 31 of the 4th calendar year after the year in which construction began, then the taxpayer will be deemed to have satisfied the continuity requirement. In addition, if (a) more than 50% of a project (by value or area) is located on U.S. federal land or (b) a project is located offshore, and, in either case, the project will require the construction of one or more high-voltage transmission lines to connect the project to the grid, then, if a taxpayer has met one of the begun construction tests and places the project in service no later than December 31 of the 10th calendar year after the year in which construction began, then the taxpayer will be deemed to have satisfied the continuity requirement. If the safe harbor deadline isn't met, the taxpayer must satisfy the continuity requirement based on the relevant facts and circumstances. A taxpayer that has met the begun construction requirement with respect to a project may relocate that project prior to placing it in service and still claim the PTC or ITC with respect to the relocated project. If a taxpayer acquires all or part of a project prior to it being placed in service, and the assets acquired consist of more than just tangible personal property or contract rights to acquire tangible personal property, then the taxpayer may qualify under the physical work test or the 5% test based on work done or amounts incurred by the transferor of the assets. If, however, the assets transferred consist only of tangible personal property or contract rights to acquire tangible personal property, then the transferee may not rely on any work done or amounts incurred by the transferor for purposes of satisfying the physical work test or the 5% test. Retrofitted projects (other than incremental hydropower projects with respect to which the retrofitted project does not include wholly new efficiency improvements or additions to capacity) may qualify for credits if at least 80% of the retrofitted project's value (fair market value of used equipment plus cost of new equipment) consists of new equipment. Whether a retrofitted project satisfies the 5% test is determined based solely on the cost of new equipment.
6. If construction began during 2017, the credit amount is reduced by 20%. If construction began during 2018, the credit amount is reduced by 40%. If construction began during 2019, the credit amount is reduced by 60%. If construction begins after 2019, the credit amount is reduced by 40%.
7. If construction begins during 2020, 2021, or 2022, the credit rate is 26%. If construction begins in 2023, the credit rate is 22%.
8. An offshore wind project means a wind project located in the inland navigable waters or the coastal waters of the United States.
9. If construction began before 2020 (and the project is placed in service before January 1, 2026), the credit rate is 30%. If construction begins during 2020, 2021, or 2022 (and the project is placed in service before January 1, 2026), the credit rate is 26%. If construction begins in 2023 (and the project is placed in service before January 1, 2026), the credit rate is 22%. If a project begins construction after December 31, 2023 or is placed in service after December 31, 2025, the credit rate is 10%.
10. A facility that uses agricultural livestock waste nutrients must have a nameplate capacity of not less than 150 kilowatts. Agricultural livestock waste nutrients means manure and litter, including wood shavings, straw, rice hulls, and other bedding material for the disposition of manure, in any case if the manure is from bovine, swine, poultry, or sheep livestock.
11. Incremental hydropower is (a) the power generated at a hydroelectric dam that was placed in service before August 9, 2005 that (b) is attributable to efficiency improvements or additions to capacity placed in service after August 8, 2005. The increased production is measured against a baseline certified by the Federal Energy Regulatory Commission ("FERC") and cannot result from operational changes not directly associated with the efficiency improvements or additions of capacity.
12. Nonhydroelectric dam hydropower means electricity generated by a hydroelectric project at an eligible nonhydroelectric dam. An eligible nonhydroelectric dam is a dam that (a) was placed in service before August 9, 2005, (b) is operated for flood control, navigation, or water supply purposes, and (c) did not produce hydroelectric power on August 9, 2005. In addition, for a hydroelectric project installed at a nonhydroelectric dam to qualify for the PTC or the ITC, the Secretary of the Treasury, in consultation with FERC, must certify that the hydroelectric project is operated so that the water surface elevation at any given location and time that would have occurred in the absence of the hydroelectric project is maintained, subject to any license requirements imposed under applicable law that change the water surface elevation for the purpose of improving environmental quality of the affected waterway.
13. Marine and hydrokinetic projects must have a nameplate capacity of at least 150 kilowatts and derive energy from (a) waves, tides, and currents in oceans, estuaries, and tidal areas, (b) free flowing water in rivers, lakes, and streams, (c) free flowing water in an irrigation system, canal, or other man-made channel, including through the use of non-mechanical structures to accelerate the flow of water for electric power production purposes, or (d) differentials in ocean temperature, but marine and hydrokinetic energy does not include any energy that is derived from any source that utilizes a dam, diversionary structure (other than a non-mechanical structure described in (c)), or impoundment for electric power production.
14. A qualifying microturbine project (a) is an integrated system comprised of a gas turbine engine, a combustor, a recuperator or regenerator, a generator or alternator, and associated balance of plant components that converts a fuel into electricity and thermal energy, including all secondary components located between existing fuel delivery infrastructure and existing power distribution infrastructure, (b) has a nameplate capacity of less than 2,000 kilowatts, and (c) has an electricity-only generation efficiency of not less than 26% at 15. Limited to \$200 per kW of capacity.
16. A CHP project (a) uses the same energy source for the simultaneous or sequential generation of electrical power, mechanical shaft power, or both, in combination with the generation of steam or other forms of useful thermal energy (including heating and cooling applications), (b) produces at least 20% of its total useful energy in the form of thermal energy that is not used to produce electrical or mechanical power (or combination thereof), (c) produces at least 20% of its total useful energy in the form of electrical or mechanical power (or combination thereof), and (d) has an energy efficiency percentage in excess of 60%, except that, if a project is designed to use biomass for at least 90% of its energy source, the energy efficiency requirement does not apply but, if the energy efficiency of such project is less than 60%, the amount of the ITC is 10% multiplied by the energy efficiency percentage of such project divided by 60%. The energy efficiency of a project is a fraction, the numerator of which is the total useful electrical, thermal, and mechanical power (determined on a Btu basis) produced by the project at normal operating rates, and expected to be consumed in the normal application of the project, and the denominator of which is the lower heating value of the fuel sources for the project (determined on a Btu basis).
17. The credit is reduced if capacity exceeds 15 MW or 20,000 hp, and the credit is 0% if capacity exceeds 50 MW or 67,000 hp.
18. A qualifying fuel cell project (a) is an integrated system comprised of a fuel cell stack assembly and associated balance of plant components that converts a fuel into electricity using electrochemical means, (b) has a nameplate capacity of at least 0.5kW of electricity using an electrochemical process, and (c) has an electricity-only generation efficiency greater than 19. Limited to \$1,500 per 1/2 kW of capacity.
20. A waste energy recovery project is a project that (a) is not a CHP project, (b) has a capacity of not more than 50 MW, and (c) generates electricity solely from heat from a building or equipment if the primary purpose of such building or equipment is not the generation of electricity.