

OVERVIEW OF SELECTED TAX INCENTIVES FOR RENEWABLE ENERGY

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TAX INCENTIVES FOR RENEWABLE ENERGY

- **Section 45 – Electricity Produced from Certain Renewable Resources, etc. Credit**
- A credit for electricity produced from certain renewable resources equal to 1.5 cents per kilowatt hour (KWH) of electricity produced from qualified energy resources.

TAX INCENTIVES FOR RENEWABLE ENERGY

- **Qualified Energy Resources**
- **Wind facility:** A wind facility is a facility using wind to produce electricity.
- **Closed-loop biomass facility:** A closed-loop biomass facility uses closed-loop biomass to produce electricity. Closed-loop biomass is any organic material from a plant that is planted exclusively for purposes of being used at a qualified facility to produce electricity.

TAX INCENTIVES FOR RENEWABLE ENERGY

- **Qualified Energy Resources – cont.**
- **Open-loop biomass facilities:** An open-loop biomass facility uses open-loop biomass to produce electricity. Open-loop biomass is any agriculture livestock waste nutrients or any solid, nonhazardous, cellulosic waste material or any lignin material that is derived from qualified sources.
- **Geothermal facility:** A geothermal facility uses geothermal energy to produce electricity. Geothermal energy is energy derived from a geothermal deposit. A geothermal deposit is a geothermal reservoir consisting of natural heat that is stored in rocks or in an aqueous liquid or vapor (whether or not under pressure).

TAX INCENTIVES FOR RENEWABLE ENERGY

- **Qualified Energy Resources – cont.**
- **Solar Energy Facility:** A facility that uses solar energy to generate electricity.
- **Small Irrigation Power Facility:** Small Irrigation Power facility is a facility that generates electricity without any dam or impoundment of water through an irrigation system canal or ditch, and the nameplate capacity rating of which is not less than 150 kilowatts but is less than 5 megawatts.

TAX INCENTIVES FOR RENEWABLE ENERGY

- **Qualified Energy Resources – cont.**
- **Municipal solid waste** has the meaning given the term “solid waste” under the Solid Waste Disposal Act. Municipal solid waste facilities include:
 - **Landfill gas facilities:** A landfill gas facility is a facility producing electricity from gas derived from the biodegradation of municipal solid waste.
 - **Trash facilities:** A trash facility is a facility, other than a landfill gas facility, that uses municipal solid waste to produce electricity.

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- **Qualified Energy Resources – cont.**
- **Qualified hydropower facility:**
- **Incremental hydropower:** A facility that produces incremental hydropower production described in IRC section 45(c)(8)(B). The determination of incremental hydropower production is not to be based on any operational changes at the facility not directly associated with the efficiency improvements or additions of capacity.
- **Non-hydroelectric dam:** Qualified hydropower facilities also include any hydropower producing facility described in IRC section 45(c)(8)(C) (relating to hydroelectric projects installed on a non-hydroelectric dams).

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- **Qualified Energy Resources – cont.**
- **Marine and hydrokinetic renewable energy facilities:** A marine or hydrokinetic renewable energy facility is a facility that produces electricity from marine and hydrokinetic renewable energy. Marine and hydrokinetic renewable energy is energy derived from:
 - Waves, tides, and currents in oceans, estuaries, and tidal areas
 - Free flowing water in rivers, lakes, and streams;
 - Free flowing water in an irrigation system, canal, or other man-made channel, including projects that utilize non-mechanical structures to accelerate the flow of water for electric power production purposes; or
 - Differentials in ocean temperature (ocean thermal energy conversion).

TAX INCENTIVES FOR RENEWABLE ENERGY

- **Section 45K – Credit for Producing Fuel From a Nonconventional Source**
- A credit of \$3 per barrel-of-oil-equivalent of qualified fuel.
- “Qualified fuels” are:
 - gas produced from biomass.
 - liquid, gaseous, or solid synthetic fuels produced from coal (including lignite), including those fuels when used as feedstocks.

TAX INCENTIVES FOR RENEWABLE ENERGY

- **IRC §48 – Energy Investment Credit**
- Equal to the energy percentage of the basis of each energy property placed in service during the tax year
- 30% energy percentage for:
 - qualified fuel cell property;
 - eligible equipment using solar energy;
 - qualified small wind energy property.

TAX INCENTIVES FOR RENEWABLE ENERGY

▪ IRC §48 – Energy Investment Credit – CONT.

- 10% energy percentage for:
 - geothermal property;
 - qualified microturbine property;
 - combined heat and power system property;
 - equipment using ground or ground water as a thermal energy source.

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- **Qualified fuel cell property:** Qualified fuel cell property is a fuel cell power plant that has a nameplate capacity of at least 0.5 kilowatt of electricity using an electrochemical process and has an electricity-only generation efficiency greater than 30%. A fuel cell power plant 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.
- **Solar property:** Equipment that uses solar energy to generate electricity, to heat or cool (or provide hot water for use in) a structure, or to provide solar process heat, excepting property used to generate energy for the purposes of heating a swimming pool; equipment that uses solar energy to illuminate the inside of a structure using fiber-optic distributed sunlight.

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- **Qualified small wind energy property:** Qualified small wind energy property is property that uses a qualifying small wind turbine to generate electricity. A qualifying small wind turbine is a wind turbine that has a nameplate capacity of not more than 100 kilowatts.
- **Geothermal property:**
 - Equipment that uses the ground or ground water as a thermal energy source to heat a structure or as a thermal energy sink to cool a structure.
 - Equipment used to produce, distribute, or use energy derived from a geothermal deposit, but only, in the case of electricity generated by geothermal power, up to (but not including) the electrical transmission stage.

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- **Qualified microturbine property:** Qualified microturbine property is a stationary microturbine power plant that has a nameplate capacity of less than 2,000 kilowatts and has an electricity-only generation efficiency of not less than 26% at International Standard Organization conditions. A stationary microturbine power plant 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 which converts a fuel into electricity and thermal plant components that convert a fuel into electricity and thermal energy.

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- **Combined heat and power (CHP) system property:** Combined heat and power system property is property comprising a system that:
 - 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, which -

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- **Combined heat and power (CHP) system property – cont**
 - 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); and
 - Produces at least 20% of its total useful energy in the form of electrical or mechanical power (or combination thereof); and
 - Has a system energy efficiency percentage in excess of 60%.
 - Does not have a capacity in excess of 50 megawatts or a mechanical energy capacity in excess of 67,000 horsepower or an equivalent combination of electrical and mechanical energy capacities.

TAX INCENTIVES FOR RENEWABLE ENERGY

▪ Payments in Lieu of Tax Credits

- American Recovery and Reinvestment Act of 2009
- Payments are in lieu of Section 48 and Section 45 Credits
- Property placed in service in 2009, 2010 and 2011 and property with respect to which construction began in 2009 – 2010
- The property must be placed in service before the corresponding credit termination date.
- Payments are 10% to 30% of the basis of the energy property corresponding to the credit percentages.

TAX INCENTIVES FOR RENEWABLE ENERGY

▪ Payments in Lieu of Tax Credits – cont.

- Applicant Eligibility – ineligible applicants
 - Governmental units
 - Tax exempt organizations
 - Organizations described in I.R.C. Section 54(j)(4)
 - Pass-through entities that have as a direct or indirect owner one of the types of entities described above
- Lessor may pass-through the payment to the lessee
- Recapture on disposition similar to credits

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