Tax Credit for Electricity From Renewables — Updated

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Recent tax laws like the American Jobs Creation Act of 2004, the Energy Policy Act of 2005, the Tax Relief and Health Care Act of 2006, the Energy Improvement and Extension Act of 2008, and the American Recovery and Reinvestment Act of 2009 have substantially altered and expanded the section 45 credit. These changes were enacted because of the success of the credit in the development of wind power as an alternative source of electricity generation. Congress believed the country would benefit from the expansion of the credit to other environmentally friendly sources of electricity production. This report summarizes the current rules on the section 45 credit and then discusses the ways in which the ARRA have altered the rules on claiming tax credits for renewable projects.

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The code has long contained incentives for generating electricity from renewable resources. Those benefits have included an investment tax credit to construct facilities that would generate electricity using solar or geothermal energy[1] and more rapid accelerated depreciation for some facilities used in generating electricity from renewable resources.[2] In the Energy Policy Act of 1992,[3] the federal government first enacted a production tax credit for electricity produced from renewable resources (section 45 credit).

The American Jobs Creation Act of 2004 (Jobs Act)[4] substantially altered and expanded the section 45 credit. The expansion was enacted because of the success of the section 45 credit in the development of wind power as an alternative source of electricity generation. Congress believed the country would benefit from the extension of the production credit to some other environmentally friendly sources of electricity production.[5] Section 45 was further expanded by the Energy Policy Act of 2005,[6] the Tax Relief and Health Care Act of 2006,[7] and the Energy Improvement and Extension Act of 2008.[8] The American Recovery and Reinvestment Act of 2009 (ARRA)[9] created new options for taxpayers placing renewable facilities in service.

Sections I and II of this report describe the section 45 credit, discuss issues that arise in establishing whether the section 45 credit will apply to a project, and explain special rules that determine which taxpayers are able to claim the credit and in what amounts.[10] Section III describes the new ARRA rules allowing a taxpayer to claim an ITC or obtain a grant from the Treasury Department in lieu of the section 45 credit.[11] Finally, sections IV, V, and VI discuss placed-in-service issues, tax depreciation of property used in generating electricity from specific renewable resources, and the availability of tax-exempt financing for some costs at those facilities.

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[1]The energy credit, which is set forth in section 48.
[2]Those depreciation benefits are discussed herein.
[3]Pub. L. No. 102-486, 106 Stat. 2776 (1992).
[4]Pub. L. No. 108-357, 118 Stat. 1418 (2004).
[5]Joint Committee on Taxation, "General Explanation of Tax Legislation Enacted in the 108th Congress" (JCS-5-05), May 2005 (blue book), at 335, *Doc 2005-11832*, *2005 TNT 104-17*.
[6]Pub. L. No. 109-58, 119 Stat. 594 (2005).
[7]Pub. L. No. 109-432, 120 Stat. 2921 (2006).
[8]Pub. L. No. 110-343, 122 Stat. 3765 (2008).
[9]Pub. L. No. 111-5, 123 Stat. 115 (2009).
[10]Note that the section 45 credit also applies to the production of some products other than electricity, such as refined coal. These rules are beyond the scope of this report and are not discussed herein.
[11]A section 1603 grant.

I. Credit Eligibility and General Rules

A. Qualified Facilities

1. Wind facilities. For wind facilities, a qualified facility is a facility owned by the taxpayer that is originally placed in service after December 31, 1993, and before January 1, 2013.[12] The credit rate for electricity sold from a wind facility qualifying for the section 45 credit is 1.5 cents per kWh (adjusted for inflation and currently 2.1 cents per kWh),[13] and the credit can be claimed for sales made during the 10-year period beginning on the date the facility was originally placed in service.

2. Closed-loop biomass facilities. 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.[14] The section 45 credit can be claimed at the same rate and over the same period as for wind facilities for a facility owned by the taxpayer and originally placed in service after December 31, 1992, and before January 1, 2014.[15]

A qualifying closed-loop biomass facility also includes a new unit placed in service after October 3, 2008, in connection with a qualifying facility, but only to the extent of the increased amount of electricity produced at the facility by reason of that new unit.[16]

A facility can qualify for the section 45 credit if, before January 1, 2014, it is originally placed in service and modified to use closed-loop biomass to co-fire with coal or other biomass, but only if the modification is approved under the Biomass Power for Rural Development Programs or is part of a pilot project of the Commodity Credit Corp., as described in 65 *Fed. Reg*. 63,052.[17] If the facility qualifies, the section 45 credit can be claimed at the same rate as for wind facilities for 10 years (starting no earlier than October 22, 2004) based on the portion of the electric energy attributable to the thermal content of the closed-loop biomass used in the facility.[18] This provision has proven to be of little use because it is unclear that either of these agencies still exists, leaving no ability to obtain the necessary approval.

3. Open-loop biomass facilities. Open-loop biomass means (1) agricultural livestock[19] waste nutrients (livestock manure and litter) and (2) any solid, nonhazardous, cellulosic waste materials, or any lignin material derived from forest-related resources, solid wood waste materials (not including municipal solid waste,[20] gas derived from biodegradation of solid waste, or paper that is commonly recycled), or agricultural sources.[21] For an agricultural livestock waste nutrients facility to qualify for the section 45 credit, the nameplate capacity rating of the facility cannot be less than 150 kilowatts.[22] Also, a facility using open-loop biomass to produce both electric energy and useful thermal energy, such as heat or steam, through the sequential use of energy (cogeneration) may be a qualified open-loop biomass facility.[23] A qualified facility now includes a new unit placed in service after October 3, 2008, in connection with an open-loop facility, but only to the extent of the increased amount of electricity produced at the facility by reason of that new unit.[24]

Open-loop biomass does not include closed-loop biomass or biomass burned in conjunction with fossil fuel (co-firing) beyond the fossil fuel required for start-up and flame stabilization. If open-loop biomass is co-fired with the minimum amount of fossil fuel necessary for start-up and flame stabilization, only the electricity produced from the open-loop biomass can qualify for the credit. The electricity produced from the fossil fuel used for start-up and flame stabilization does not qualify for the credit.[25] If open-loop biomass is co-fired with fossil fuel in excess of the minimum amount of fossil fuel necessary for start-up and flame stabilization, the biomass is not open-loop biomass as defined in section 45, and none of the electricity produced from the biomass qualifies for the section 45 credit.[26]

However, electricity produced from open-loop biomass that is co-fired with fuels other than fossil fuels may qualify for the section 45 credit. Electricity produced from the other fuel may separately qualify for the section 45 credit if the other fuel meets the definition of a qualified energy resource under section 45(c) and the facility is placed in service during the period specified in section 45(d) for that qualified energy resource. If a taxpayer produces electricity from both open-loop biomass and other fuels that do not separately qualify (other than a fossil fuel) and sells part or all of the electricity produced to an unrelated party, only the applicable percentage of the electricity sold to the unrelated party is treated as electricity produced from open-loop biomass. The applicable percentage for this purpose is the percentage of the thermal content of all fuels used to produce the

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[12]Section 45(d)(1). Note that there is no requirement that a wind facility obtain an allocation of the section 45 credit from a state or federal government agency. INFO 2005-0222 (Dec. 30, 2005).

[13]Notice 2009-40, 2009-19 IRB 931, *Doc 2009-10506*, *2009 TNT 88-31*.

[14]Section 45(c)(2).

[15]Section 45(d)(2)(A)(i).

[16]Section 45(d)(2)(B).

[17]Section 45(d)(2)(A)(ii).

[18]Section 45(d)(2)(B); *see* H.R. Rep. No. 108-755, at 510 (2004) (Conf. Rep.) (Jobs Act Conference Report).

[19]Agricultural livestock includes bovine, swine, poultry, and sheep. Section 45(c)(3)(B)(ii). Note that before the changes made by the Jobs Act, a facility generating electricity from poultry waste qualified for the credit at the same rate and over the same period as a wind facility. Thus, for poultry waste facilities, the Jobs Act changes reduced the allowable credit. However, the

(Footnote continued in next column.)

Jobs Act amendments did not apply to poultry waste facilities placed in service before January 1, 2005. Jobs Act Conference Report, *supra* note 18, at 512.

[20]Municipal solid waste is a separate category, which is discussed *infra*.

[21]Section 45(c)(3).

[22]Section 45(d)(3)(A)(i)(II).

[23]Notice 2008-60, 2008-2 C.B. 178, *Doc 2008-14112*, *2008 TNT 124-10*.

[24]Section 45(d)(3)(B).

[25]Notice 2008-60, *supra* note 23.

[26]*Id.*

electricity that is thermal content from open-loop biomass. Electricity is treated as produced from both open-loop biomass and other fuels to the extent (i) open-loop biomass and other fuels are commingled during combustion, (ii) steam produced from the combustion of open-loop biomass and from the combustion of other fuels is commingled before or during the production of the electricity, and (iii) electricity produced from open-loop biomass and from other fuels is commingled before transmission to the purchaser.[27]

Under a prior notice (Notice 2006-88),[28] if electricity produced from open-loop biomass at any location was sold by a taxpayer to an unrelated person and either the taxpayer or a related person simultaneously purchased electricity from an unrelated person for use at the same location, the IRS treated the sale of the electricity as a sale to an unrelated person only to the extent the amount of electricity sold exceeded the amount of electricity purchased. That rule was removed when Notice 2006-88 was revised and superseded by Notice 2008-60. However, Notice 2008-60 does not state a positive rule for credit qualification in such a fact pattern.

Unfortunately, the IRS has announced that it will not issue any private letter rulings regarding section 45 as it relates to open-loop biomass,[29] thus making it difficult to obtain clarification of this guidance.

The credit for electricity produced from open-loop biomass can be claimed for 10 years (five years for facilities placed in service on or before August 8, 2005) at half the credit rate for wind (currently 1.1 cents per kWh).[30] Regarding facilities for producing electricity from solid, nonhazardous, cellulosic waste materials (as described in section 45(d)(3)(ii)), qualifying facilities include facilities originally placed in service before October 22, 2004, in which case the five-year period for claiming the credit started on January 1, 2005.[31] Either type of open-loop biomass facility must be placed in service before January 1, 2014.[32]

In Notice 2008-60, the IRS states that an open-loop biomass facility will not be treated as originally placed in service after October 22, 2004, if more than 20 percent of the facility's total value (the cost of the new property plus the value of the used property) is attributable to property placed in service on or before October 22, 2004. Similarly, an open-loop biomass facility will not be treated as originally placed in service after August 8, 2005, if more than 20 percent of the facility's total value (the cost of the new property plus the value of the used property) is attributable to property placed in service on or before August 8, 2005. The notice provides the following example:

> A power plant using fossil fuel was originally placed in service before October 22, 2004. The power plant consists of a burner, a boiler, a steam header, a turbine, and a generator. After October 22, 2004, one new burner and boiler using open-loop biomass are added to the power plant. The new burner and boiler are connected to the existing steam header, turbine, and generator in the power plant. Under section 3.01(1) of this notice, the open-loop biomass facility consists of the entire power plant that is operated as a separate integrated unit and includes both the existing power plant and the new burner and boiler. The fair market value of the existing power plant on the date the new burner and boiler are placed in service exceeds 20 percent of the facility's total value (the cost of the new burner and boiler plus the value of the used property). Under section 3.01(3) of this notice, the facility will not be treated as originally placed in service after October 22, 2004. Accordingly, section 45(b)(4)(B)(ii) applies and the credit period for the facility is the five-year period beginning on January 1, 2005.

Thus, if a taxpayer cannot demonstrate that 80 percent of the value of a converted facility is attributable to the new construction, the credit generally will be unavailable — the five-year period beginning on January 1, 2005, ends at the end of 2009. It would seem to make sense to incentivize the conversion of coal facilities to biomass facilities, regardless of whether the 80 percent test is met, but apparently in the IRS's view, section 45 does not do this.

4. Geothermal energy facilities.[33] A geothermal energy facility is a facility generating electricity from a geothermal deposit.[34] 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).[35] To qualify for the section 45 credit, a geothermal energy facility must be originally placed in service after October 22, 2004, and before January 1, 2014.[36] The section 45 credit can be claimed for 10 years (five years for facilities placed in service on or before August 8, 2005) from the original placed-in-service date at the same credit rate (currently 2.1 cents per kWh) as for wind facilities.[37]

Geothermal energy facilities can also qualify for the energy credit,[38] which is an ITC. The energy credit for any tax year is 10 percent of the basis of the energy property placed in service during that year.[39]

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[27]*Id.*

[28]Notice 2006-88, 2006-2 C.B. 686, *Doc 2006-20109, 2006 TNT 187-10.*

[29]Notice 2008-60, *supra* note 23.

[30]Section 45(b)(4).

[31]Section 45(b)(4)(B)(ii).

[32]Section 45(d)(3).

[33]The code also makes reference to solar energy facilities qualifying for the section 45 credit. However, that is limited to facilities placed in service before January 1, 2006. Since then, solar facilities have instead qualified for a 30 percent ITC under section 48. A discussion of section 48 generally is beyond the scope of this report.

[34]Section 45(c)(4).

[35]Jobs Act Conference Report, *supra* note 18, at 509.

[36]Section 45(d)(4).

[37]Section 45(b)(4).

[38]Section 48.

[39]Section 48(a). *See* discussion below regarding the opportunity to elect a 30 percent ITC in lieu of the section 45 credit under provisions enacted as part of ARRA.

Both the section 45 credit rules and the energy credit rules provide that taxpayers owning a geothermal facility cannot claim both the section 45 credit and the energy credit.[40] Thus, if a taxpayer owning a geothermal facility claims credit for any year under section 45, the taxpayer is precluded from claiming any ITC under the energy credit.[41]

5. Municipal solid waste. Qualifying municipal solid waste facilities are facilities or units that incinerate municipal solid waste[42] and are originally placed in service after October 22, 2004, and before January 1, 2014.[43] Two different qualifying facilities use municipal solid waste as a qualifying resource: landfill gas facilities and trash facilities.[44] Landfill gas is methane gas derived from the biodegradation of municipal solid waste.[45]

Trash facilities are facilities that use municipal solid waste (garbage) to produce steam to drive a turbine for the production of electricity.[46] The Environmental Protection Agency clarifies that a qualifying trash facility includes a new unit placed in service after October 22, 2004, that increases electricity production capacity at an existing trash facility.[47] For either a landfill gas facility or a trash facility to qualify for the section 45 credit, the facility must be originally placed in service after October 22, 2004, and before January 1, 2014.[48] The section 45 credit can be claimed for 10 years (5 years for facilities placed in service on or before August 8, 2005) at half the credit rate for wind (currently 1.1 cents per kWh).[49]

6. Qualified hydropower. A qualifying hydropower facility is (1) a facility that produced hydroelectric power (a hydroelectric dam) before August 8, 2005, at which efficiency improvements or additions to capacity have been made after August 8, 2005, and before January 1, 2014, that enable the taxpayer to produce incremental hydropower; or (2) some facilities that did not produce hydroelectric power (a nonhydroelectric dam) and to which turbines or other electricity generating equipment have been added.[50]

At an existing hydroelectric facility, the taxpayer may claim a credit only for the production of incremental hydroelectric power. Incremental hydroelectric power for any tax year is equal to the percentage of average annual hydroelectric power produced at the facility attributable to the efficiency improvement or additions of capacity determined by using the same water flow information used to determine an historic average annual hydroelectric power production baseline for that facility. The Federal Energy Regulatory Commission (FERC) will certify the baseline power production of the facility and the percentage increase resulting from the efficiency and capacity improvements. The determination of incremental hydropower production will not be based on any operational changes at the facility that are not directly associated with the efficiency improvements or additional capacity.[51]

At a nonhydroelectric dam, for property originally placed in service after December 31, 2008, a facility qualifies if (a) the hydroelectric project installed on the nonhydroelectric dam is licensed by the FERC and meets all other applicable environmental, licensing, and regulatory requirements; (b) the nonhydroelectric dam was placed in service before October 3, 2008, and was operated for flood control, navigation, or water supply purposes and did not produce hydroelectric power before October 3, 2008; and (c) 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 the environmental quality of the affected waterway.[52]

For electricity generated from a qualifying hydropower facility, the taxpayer may claim a credit for 10 years at half the credit rate for wind (currently 1.1 cents per kWh).[53]

7. Marine and hydrokinetic renewable energy.[54] A qualified facility producing electricity from marine and hydrokinetic renewable energy (marine renewables) must be owned by the taxpayer, have a nameplate capacity rating of at least 150 kilowatts, and be originally placed in service on or after October 3, 2008, and before January 1, 2014.[55] ''Marine and hydrokinetic renewable energy'' means energy derived from (i) waves, tides, and currents in oceans, estuaries, and tidal areas; (ii) free-flowing water in rivers, lakes, and streams; (iii) free-flowing water in an irrigation system, canal, or other man-made channel, including projects that use nonmechanical structures to accelerate the flow of water for electric power production purposes; or (iv) differentials in ocean temperature (ocean thermal energy conversion). The term does not include any energy that is derived from any source that uses a dam, diversionary structure (except as provided in (iii) above), or impoundment for electric

[40]Sections 45(d)(4) and 48(a).

[41]Jobs Act Conference Report, *supra* note 18, at 511.

[42]''Municipal solid waste'' has the meaning given the term ''solid waste'' under section 2(27) of the Solid Waste Disposal Act (42 U.S.C. section 6903(27)). Section 45(c)(6).

[43]Section 45(d)(6).

[44]Jobs Act Conference Report, *supra* note 18, at 510-511.

[45]Section 45(d)(6).

[46]Section 45(d)(7).

[47]*Id.*; JCT, ''Description and Technical Explanation of the Conference Agreement of H.R. 6, Title XIII, the 'Energy Tax Incentives Act of 2005'" (JCX-60-05), July 28, 2005 (EPA Description) at 24, *Doc 2005-16156*, *2005 TNT 145-12*.

[48]Section 45(d)(6) and (7).

[49]Section 45(b)(4).

[50]Section 45(d)(9).

[51]Section 45(c)(8)(B).

[52]Section 45(c)(8)(C) and (d)(9). Note that different rules applied to nonhydroelectric dams placed in service before January 1, 2009.

[53]Section 45(b)(4).

[54]For periods after October 2, 2008, marine and hydrokinetic renewable energy facilities subsume small irrigation power facilities. The section 45 credit for electricity produced from small irrigation facilities could be claimed for 10 years (5 years for facilities placed in service on or before August 8, 2005) at half the credit rate for wind.

[55]Section 45(d)(11).

Electricity Produced From Renewable Resources	Credit Amount for 2009[a] (cents per kWh; dollars per ton)	Credit Period for Facilities Placed in Service After August 8, 2005	Required In-Service Date
Wind	2.1¢	10 years	December 31, 2012
Closed-loop biomass	2.1¢	10 years	December 31, 2013
Open-loop biomass	1.1¢	10 years	December 31, 2013
Geothermal	2.1¢	10 years	December 31, 2013
Municipal solid waste	1.1¢	10 years	December 31, 2013
Incremental hydropower	1.1¢	10 years	December 31, 2013
Marine renewable	1.1¢	10 years (limited to facilities placed in service on or after October 3, 2008[b])	December 31, 2013

[a]Notice 2009-40.
[b]This limitation does not apply to small irrigation power facilities.

power production purposes.[56] For electricity produced from marine renewables, the taxpayer may claim a credit for 10 years at half the credit rate for wind (currently 1.1 cents per kWh).[57]

B. Summary Table of Section 45 Credit

The discussion above in this section is summarized in the table above.

II. Special Rules for Qualifying for the Credit

A. General Requirements

To claim the section 45 credit, a person must sell electricity that it produces to an unrelated person.[58] Only production in the United States is taken into account.[59] A lessee or operator may claim the credit in lieu of the owner of the qualifying facility in the case of qualifying open-loop biomass facilities and in the case of a closed-loop biomass facility modified to co-fire with coal, other biomass, or both.[60]

Persons are treated as related to each other if they would be treated as a single employer under the regulations prescribed under section 52(b). For a corporation that is a member of an affiliated group of corporations filing a consolidated return, the corporation will be treated as selling electricity to an unrelated person if the electricity is sold to that person by another member of the group.[61] In Notice 2008-60, the IRS expanded this concept beyond the code provision. Under the notice, electricity or coal will be treated as sold to an unrelated person if the ultimate purchaser is not related to the person that produces the electricity or coal. The requirement of a sale to an unrelated person will be treated as satisfied in those circumstances if the producer sells the electricity or coal to a related person for resale to a person that is not related to the producer.[62]

Also, the IRS has ruled in a private letter ruling that when a public utility commingles output from a wind facility with other electricity transmitted across the grid that is sold to the utility's customers in the ordinary course of business under public utility commission tariffs, the electricity so sold that is attributable to the wind facility qualifies for the section 45 credit.[63]

For a facility in which more than one person has an ownership interest, production from the facility generally is allocated among the owners in proportion to their respective ownership interests in the gross sales from the facility.[64] For a partnership, the section 45 credits attributable to the partnership may be passed through to and allocated among the partners in accordance with each partner's interest in the partnership at the time the section 45 credits arise.[65] There are no special rules under section 45 regarding partnership allocations.[66] If a partnership receipt gives rise to the section 45 credit and that receipt also gives rise to a valid allocation of partnership income, the partners' interests in the partnership for the item of credit must be in the same proportion as the partners' respective distributive shares of the income.[67] In three private letter rulings, this allocation was based on the partnerships' allocations of gross income arising from receipts from the sale of electricity sold to unrelated

[56]Section 45(c)(10).
[57]Section 45(b)(4).
[58]Section 45(a)(2)(B).
[59]Section 45(e)(1).
[60]Section 45(d)(2)(B)(iii) and (3)(B). The Jobs Act Conference Report (*supra* note 18, at 512), the blue book (*supra* note 5, at 339), and the EPA Description (*supra* note 47, at 17) all state that a lessee or operator may claim the section 45 credit for qualifying open-loop biomass facilities originally placed in service *on or before* October 22, 2004, but section 45(d)(3)(B) does not contain that limitation.
[61]Section 45(e)(4).
[62]*See* Notice 2006-40, 2006-1 C.B. 855, *Doc 2006-6997*, or *2006 TNT 70-6*, for a similar rule under the nuclear production credit in section 45J.
[63]LTR 200518060 (Jan. 19, 2005), *Doc 2005-9630*, *2005 TNT 88-18*. Note that output consumed by the taxpayer in its buildings and facilities (whether leased or owned) and not sold to third parties does not qualify for the section 45 credit.
[64]Section 45(e)(3).
[65]LTR 200142018 (July 23, 2001), *Doc 2001-26568*, *2001 TNT 204-29*, and LTR 9417040 (Feb. 1, 1994), *94 TNT 84-19*. *See* LTR 200318066 (Jan. 29, 2003), *Doc 2003-10986*, *2003 TNT 86-49*.
[66]INFO 2005-0222 *supra* note 12.
[67]LTR 200318066, *supra* note 65.

persons during the tax year.[68] In those rulings, the IRS allowed allocations to a partner even though the partner did not expect to receive a positive cash-on-cash return on its investment. However, the rulings noted that the partners did expect to achieve a positive return, taking into account their allocations of section 45 credits.[69] Unfortunately, it is unlikely that those three rulings will be supplemented with additional letter rulings in this area. The IRS has announced that it will not rule on any issues under subchapter K for partnerships claiming the section 45 credit.[70]

However, in Rev. Proc. 2007-65[71] the IRS established a safe harbor under which it will respect the allocation of section 45 credits for wind facilities by partnerships in accordance with section 704(b). The safe harbor was intended to simplify the application of section 45 to partners and partnerships that own and produce electricity from qualified wind energy facilities. By its terms, the safe harbor applies to any partnership (the project company) between a project developer (the developer) and one or more investors (the investors), with the project company owning and operating the project containing the qualified facilities (the wind farm). The safe harbor applies only if the developer, the investors, and the project company satisfy every requirement. Further, the safe harbor applies only to partners or partnerships with section 45 credits from renewable resources from wind. It does not apply to any other tax credits. The safe harbor was intended to provide guidance, in lieu of letter rulings, for taxpayers establishing or participating in wind energy partnerships.[72]

Some of the important requirements to fit within the safe harbor are:

- The developer must have a minimum 1 percent interest in each material item of partnership income, gain, loss, deduction, and credit at all times during the existence of the project company.
- Each investor must have, at all times during the period it owns a partnership interest in the project company, a minimum interest in each material item of partnership income and gain equal to 5 percent of the investor's percentage interest in partnership income and gain for the tax year for which the investor's percentage share of income and gain will be the largest, as adjusted for sales, redemptions, or dilution of its interest.
- On or before the later of the date the wind farm is placed in service or the date the investor acquires its interest in the project company, the investor must make a minimum unconditional investment in the project company (the investor minimum investment). In general, the investor must maintain the investor minimum investment throughout the duration of its ownership of its partnership interest in the project company. Contributions required to be made in the future will not be included in the investor minimum investment until the contributions are actually made to the partnership. The investor minimum investment must equal at least 20 percent of the sum of the fixed capital contributions plus reasonably anticipated contingent capital contributions required to be made by the investor under the partnership agreement.
- At least 75 percent of the sum of the fixed capital contributions plus reasonably anticipated contingent capital contributions to be contributed by an investor for an interest in the project company must be fixed and determinable obligations that are not contingent in amount or certainty of payment.
- The developer, the investor, or any related party may only have a contractual right to purchase the wind farm, any property included in the wind farm, or an interest in the project company (property) if the contractual right is negotiated for valid non-tax business reasons at arm's length by parties with material adverse interests. The purchase price for the property must either be a price that is not less than the fair market value of the property determined at the time of exercise or, if the purchase price is determined before, a price that the parties reasonably believe, based on all facts and circumstances at the time the price is determined, will not be less than the fair market value of the property at the time the right may be exercised. The developer (or a related party) may not have a contractual right to purchase the wind farm or an interest in the project company earlier than five years after the qualified facility is first placed in service.
- The project company may not have a contractual right to cause any party to purchase the wind farm or any property included in the wind farm, excluding electricity, from the project company. An investor may not have a contractual right to cause any party to purchase its partnership interest in the project company.
- No person may guarantee or otherwise insure the investor the right to any allocation of the credit.
- The project company must bear the risk that the available wind resource is not as great as anticipated or projected. The developer, the turbine supplier, or any power purchaser may not provide a guarantee that the wind resource will be available at a specified level. A guarantee regarding wind resource availability may be provided by a third party not related to the developer, the turbine supplier, any power purchaser, or any other project participant if the project company or an investor directly pays the cost of or premium for that guarantee. A long-term power purchase agreement entered into between the project company and a party not related to the project company does not constitute a guarantee.

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[68]LTR 200609001 (Oct. 24, 2005), *Doc 2006-4166*, *2006 TNT 43-27*; LTR 200609002 (Nov. 2, 2005), *Doc 2006-4167*, *2006 TNT 43-28*; and LTR 200620004 (Nov. 2, 2005), *Doc 2006-9744*, *2006 TNT 98-21*.

[69]*Id.*

[70]Notice 2008-60, *supra* note 23.

[71]2007-2 C.B. 967, *Doc 2007-23470*, *2007 TNT 204-14*. Rev. Proc. 2007-65 recently was revised by Announcement 2009-69, *Doc 2009-20970*, *2009 TNT 181-8*. The text describes the revenue procedure, as revised.

[72]*See also* LTR 200837028 (June 11, 2008), *Doc 2008-19496*, *2008 TNT 179-24*.

However, a take-or-pay contract between related parties would constitute a guarantee and is not permissible.

- The developer (or a party related to the developer) may not lend any investor the funds to acquire any part of the investor's interest in the project company or guarantee any indebtedness incurred or created in connection with the acquisition of that investor's interest in the project company.
- The section 45 credit must be allocated in accordance with reg. section 1.704-1(b)(4)(ii).

B. Section 45 Credit Limitations

1. Component of general business credit. The section 45 credit is a component of the general business credit[73] and is subject to the general business credit limitation. The general business credit cannot reduce a taxpayer's tax liability below a minimum threshold in any given year. The minimum threshold is the greater of (1) 25 percent of the excess of a taxpayer's regular income tax liability exceeding $25,000 (calculated before taking the general business credit) or (2) the taxpayer's tentative minimum tax.[74] However, for any facility placed in service after October 22, 2004, the tentative minimum tax is treated as being zero during the four-year period beginning on the date the facility was originally placed in service.[75]

Any section 45 credit that cannot be used (whether as a result of the general business credit limitation or otherwise) is allowed a one-year carryback period and a 20-year carryforward period.[76]

2. Phaseout of credit and inflation adjustments. The section 45 credit is subject to a phaseout if the reference price for electricity exceeds a specified threshold. The amount of the credit is reduced by an amount that bears the same ratio to the amount of the credit as the amount by which the reference price for the calendar year in which the sale occurs exceeds 8 cents, bears to 3 cents.[77] For the section 45 credit to be phased out for a year — even in part — the reference price would have to exceed the 8 cents threshold price (that amount is adjusted for inflation). The 2009 reference price for wind facilities[78] of 4.32 cents per kWh is well below the inflation-adjusted threshold price, and, to date, the section 45 credit has never been phased out for a year, even in part, as a result of that provision.

As previously noted, the 1.5 cents per kWh credit amount (now 2.1 cents per kWh) is adjusted by an inflation factor.[79] For electricity produced in open-loop biomass facilities, landfill gas facilities, trash facilities, qualified hydropower production facilities, and marine and hydrokinetic renewable energy facilities, section 45(b)(4)(A) requires the amount in effect under section 45(a)(1) (before rounding to the nearest 0.1 cent) to be reduced by one-half. Under the calculation required by section 45(b)(2), the credit for renewable electricity production for calendar year 2009 under section 45(a) is 1.1 cents per kWh on the sale of electricity produced by those facilities. The Treasury secretary must by April 1 of each calendar year determine and publish in the *Federal Register* the inflation adjustment factor and reference price for that calendar year.[80] The inflation adjustment factor is based on a fraction the numerator of which is the GDP implicit price deflator for the preceding calendar year and the denominator of which is the GDP implicit price deflator for calendar year 1992.[81]

3. Credit reduced for grants, tax-exempt bonds, subsidized energy financing, and other credits. The amount of the section 45 credit that can be claimed is reduced to the extent that the facility is the beneficiary of other subsidies. The amount of the reduction is based on a fraction the numerator of which is the sum, for the tax year and all prior tax years, of:

- grants provided by the United States, a state, or a political subdivision of a state;
- proceeds of an issue of state or local government obligations used to provide financing for the project, the interest on which is exempt from tax;
- the aggregate amount of subsidized energy financing provided (directly or indirectly) under a federal, state, or local program provided in connection with the project; and
- the amount of any other credit allowable for any property that is part of the project.

The denominator is the aggregate amount of additions to the capital account for the project for the tax year and all prior tax years. Note that the reduction cannot exceed 50 percent of the amount of the credit.[82] Also, the reduction in credit does not apply to a taxpayer-owned facility that before January 1, 2006, is originally placed in service and modified to use closed-loop biomass to cofire with coal or other biomass, but only if the modification is approved under the Biomass Power for Rural Development Programs or is part of a pilot project of the Commodity Credit Corp., as described in 65 *Fed. Reg.* 63,052.[83]

The IRS has issued several rulings describing what does or does not constitute these types of subsidies. Regarding the term ''any other credit allowable,'' the IRS has ruled that the credit cannot be reduced on account of a state or local tax credit. Rather, the term is construed to include only federal tax credits allowable under the code for property that is part of a project.[84]

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[73]*See* section 38(b)(8).

[74]Section 38(c)(1).

[75]Section 38(c)(4).

[76]Section 39(a).

[77]Section 45(b)(1).

[78]The reference prices for facilities producing electricity from closed-loop biomass, open-loop biomass, geothermal energy, solar energy, small irrigation power, and municipal solid waste have not been determined for calendar year 2008. The IRS is exploring methods of determining those reference prices.

[79]Section 45(b)(2).

[80]The information for 2009 is found in Notice 2009-40, *supra* note 13.

[81]Section 45(e)(2)(B).

[82]Section 45(b)(3).

[83]Section 45(b)(3) and (d)(2)(A)(ii); Jobs Act Conference Report, *supra* note 18, at 512.

[84]Rev. Rul. 2006-9, 2006-1 C.B. 519, *Doc 2006-2313*, *2006 TNT 25-37*.

In other situations, the IRS has based its rulings on language from the legislative history of the Crude Oil Windfall Profit Tax Act of 1980, which enacted the section 29 credit containing a similar reduction scheme. That legislative history provided that the credit reduction is in proportion to ''Federal, State and local grants, subsidized energy loans, and tax-exempt financing provided in connection with the *construction or acquisition* of the facility or its equipment.''[85] Based on that legislative history, the IRS issued a revenue ruling concluding that fuel price-support payments made by the United States are not grants that reduce the credit allowed by section 29 because the price-support payments are based on the sale price of the fuel and not on the construction or acquisition cost.[86]

The IRS has applied that logic to the section 45 credit, ruling that, based on that legislative history, a state law income tax credit directly attributable to the amount of electricity produced and sold by a wind project, and not attributable to the capital cost of the construction or acquisition of the project, does not reduce the section 45 credit.[87] Similarly, a state income tax credit based in part on the amount of real property taxes and the increase in employment is not provided in connection with the capital cost of construction or acquisition of a wind facility and does not reduce the section 45 credit.[88] Also, the IRS has ruled that a state sales and use tax exemption would not reduce the section 45 credit and that a state agency loan guarantee would not do so, either.[89]

In another letter ruling,[90] ProjectCo agreed to transfer the environmental attributes (including all credits, benefits, emissions, reductions, offsets, and allowances resulting from the avoidance of any emission of any gas, chemical, or other sources) associated with the production of electricity at the project to a tax-exempt organization formed in response to state legislation to establish a public purposes charge to the rates paid by the customers of utilities in the state for, among other things, the above-market costs of renewable energy resources in exchange for an advance payment. ProjectCo would earn the advance payment as it delivers electricity to the utility that has agreed to buy power from the project. ProjectCo must repay the tax-exempt organization an amount equal to any portion of the advance payment that has not been earned by the 15th year after the commencement of commercial operations. The statute also provides a transferable, nonrefundable business energy tax credit (BETC) for up to a certain limit of the cost of energy or conservation projects, including wind projects, located in the state. The BETC may be used to offset state income tax over a specified period.

The IRS concluded that the advance payment will not be considered as any of the types of subsidies listed above. The IRS reasoned that a grant does not impose any obligation or condition to directly or indirectly repay any amount to the transferor.[91] However, the IRS would not rule on whether the BETC is such a subsidy.[92]

Also, the IRS has ruled that state subsidies from a private, investor-owned electric utility company do not constitute subsidized energy financing.[93] In that situation, a state regulatory commission authorized the creation of an organization under an order approving the restructuring plan for a privately owned utility company. Under the terms of the approval, the utility would fund the organization's activities with regular payments based on an assessment in the transmission and distribution tariff for each kWh of electricity that the utility delivers during a specified period. The organization would use those payments by providing wind energy production incentives to promote the development and use of renewable energy technologies, energy conservation and efficiency, and economic development projects that promote clean energy. Despite the fact that the commission approves the organization's board of directors and that the board operates under bylaws approved by the commission, the IRS concluded that the organization's wind energy incentive payments were not a governmental program because the organization is a nongovernmental body that derives its funding from a private, investor-owned utility company.

Presumably, for a subsidy ''to be provided in connection with the construction or acquisition of the facility or its equipment,'' the subsidy has to actually assist in financing the facility. As mentioned in the discussion of placed-in-service issues, the definition of facility that has been used by the IRS is quite narrow, at least for wind and open-loop biomass facilities. In private rulings the IRS has excluded from the term ''facility'' support and delivery assets such as transformers, on-site power collection systems, monitoring and meteorological equipment, and site improvements such as roadways and fencing. It would seem that a subsidy to help pay for those costs might not reduce the section 45 credit. In the context of a landfill gas facility, for example, if the facility is defined as the facility that generates electricity, using tax-exempt bonds to finance the construction of the wells or the facilities used to clean the landfill gas apparently would not reduce the section 45 credit. In two recent

[85]H.R. Rep. No. 96-817 (1980) (Conf. Rep.), 1980-3 C.B. 245, 300 (emphasis added). *See* LTR 200142018, *supra* note 65.

[86]Rev. Rul. 85-77, 1985-1 C.B. 14.

[87]LTR 200311021 (Dec. 9, 2002), *Doc 2003-6711*, *2003 TNT 51-17*.

[88]LTR 200336023 (June 5, 2003), *Doc 2003-19843*, *2003 TNT 173-26*. Note that under Rev. Rul. 2006-9, *supra* note 85, presumably the section 45 credit also would not be reduced in these rulings because these are state, not federal, tax credits.

[89]LTR 200318066, *supra* note 65.

[90]LTR 200439038 (May 17, 2004), *Doc 2004-18878*, *2004 TNT 187-14*.

[91]*See also* LTR 200318066, *supra* note 65 (ruling similarly for a supplemental production payment by a state agency that had to be spent on operating expenses, was earned as the facility produces and sells electricity, and had to be repaid if not earned).

[92]This issue was resolved by Rev. Rul. 2006-9, *supra* note 85, discussed above.

[93]LTR 200202048 (Oct. 10, 2001), *Doc 2002-848*, *2002 TNT 9-60*.

private rulings issued to rural electric cooperatives, the IRS has hinted that the facility does not include the wells, etc.[94]

4. Electricity sold to utilities under some contracts. Under the code, the section 45 credit does not apply to electricity (i) produced at a qualified facility placed in service by the taxpayer after June 30, 1999, and (ii) sold to a utility under a contract originally entered into before January 1, 1987 (whether or not amended or restated after that date).[95] However, there is an exception whereby that general rule will not apply if the contract is amended to impose a limit on the amount of electricity that may be sold under the contract at prices that exceed avoided cost prices determined at the time of delivery. The IRS has ruled that this exception to the credit applies to a transferee of the facility and that the relevant date is the date the transferee taxpayer places the facility in service.[96] In reaching that conclusion, the IRS noted that the term ''originally'' does not appear in section 45(e)(7)(A)(i).

5. Interaction with section 29 credit. No facility that previously claimed or currently claims a credit under section 29 is a qualifying facility for purposes of the section 45 credit.[97]

III. Election to Claim ITC or Treasury Grant

ARRA added two provisions that dramatically change the analysis of credit computation for many of the types of facilities that traditionally have qualified for the section 45 credit.

A. General Rules

1. Investment tax credit. Section 48(a) was amended to allow taxpayers to make an irrevocable election to have some qualified facilities be treated as energy property eligible for a 30 percent ITC under section 48. For this purpose, qualified facilities are facilities otherwise eligible for the section 45 credit (other than refined coal, Indian coal, and solar facilities) for which no credit under section 45 has been allowed. A taxpayer electing to treat a facility as energy property may not claim the production credit under section 45. Taxpayers are generally allowed to make this election for property placed in service after December 31, 2008, and before the end of the current placed-in-service deadlines in section 45 (generally through 2013; through 2012 for wind facilities).[98] To make the election for a qualified facility, a taxpayer must claim the energy credit on a completed Form 3468 for qualified property that is an integral part of the facility and file that form with the taxpayer's income tax return for the year in which the property is placed in service. The election to take the ITC in lieu of the section 45 credit must be made on a timely filed return (including extensions) for the tax year in which the facility that is to be treated as a qualified investment credit facility is placed in service. The taxpayer must make a separate election for each qualified facility that is to be treated as a qualified ITC facility.[99]

Note that there are advantages in electing to claim the ITC rather than the section 45 credit. For example, under section 48 the ITC is not reduced if the taxpayer receives subsidized energy financing or finances its facility using tax-exempt bonds.[100] Also, the entire ITC can be claimed against the alternative minimum tax.[101] Moreover, for some property with a normal construction period of two years or more, the ITC can be claimed during the construction period as expenditures (qualified progress expenditures) made by the taxpayer.[102] The relative advantages of the section 45 credit, the ITC, and the section 1603 grant are detailed below.

2. Section 1603 grants. A taxpayer may elect to apply to Treasury to obtain a section 1603 grant in lieu of an ITC or a section 45 credit. In general, for property that would otherwise be eligible for the section 45 credit, the section 1603 grant amount is 30 percent of the basis of the property that would comprise a section 45 credit-eligible facility. This election can be made by a taxpayer that owns a wind facility, a closed-loop biomass facility, an open-loop biomass facility, a geothermal facility, a landfill gas facility, a trash facility, a qualified hydropower facility, or a marine and hydrokinetic facility.[103] Taxpayers can claim the grant for property placed in service in 2009 and 2010 and for property in which construction began in 2009 or 2010[104] and is completed before 2013 (in the case of wind facility property) or 2014 (in the case of other renewable power facility property eligible for credit under section 45).[105]

Based on guidance provided by Treasury and the Department of Energy (the section 1603 guidance),[106] for

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[94]*See* LTR 200844008 (June 25, 2008), *Doc 2008-23201*, *2008 TNT 213-19*; LTR 200845030 (June 25, 2008), *Doc 2008-23720*, *2008 TNT 218-23*. *See* discussion below regarding the effect of a narrower definition on the ITC and section 1603 grant.

[95]Section 45(e)(7)(A).

[96]LTR 200440001 (June 9, 2004), *Doc 2004-19301*, *2004 TNT 192-23*.

[97]Section 45(e)(9); Jobs Act Conference Report, *supra* note 18, at 512.

[98]Section 48(a)(5).

[99]Notice 2009-52, 2009-25 IRB 1094, at section 2.01, *Doc 2009-12841*, *2009 TNT 107-5*. Contrast this with the section 1603 guidance described below, which allows some facilities to be aggregated for purposes of electing a section 1603 grant.

[100]*See* ARRA section 1103.

[101]Contrast this with the section 45 credit, which can reduce AMT only for the first four years in which the credit is claimed.

[102]Section 48(b). Note that section 48(d) appears to contemplate that a taxpayer may claim credits for progress expenditures, later recapture the credits, and then apply for and obtain a section 1603 grant. This possibility is not further discussed either in Notice 2009-52 or in the section 1603 guidance.

[103]Note that section 1603 grants can also be elected for some types of facilities that qualify under section 48, even before ARRA, including solar facilities.

[104]The rules in the section 1603 guidance for when construction begins are taken largely from the bonus depreciation rules of section 168(k). *See* reg. section 1.168(k)-1(b)(4)(ii) and (iii).

[105]ARRA section 1603. The section 1603 grant is to be paid to a taxpayer during the 60-day period beginning on the later of the grant application date or the date the property for which the grant is being made is placed in service. ARRA section 1603(c).

[106]Treasury Department, ''Payments for Specified Energy Property in Lieu of Tax Credits Under the American Recovery

(Footnote continued on next page.)

property placed in service in 2009 or 2010, applications must be submitted after the property has been placed in service and before October 1, 2011. Treasury will review the applications and make payments to qualified applicants within 60 days after it receives the completed applications. For property not placed in service in 2009 or 2010 but for which construction began in 2009 or 2010, applications must be submitted after construction commences but before October 1, 2011. If the property has been placed in service at the time of the application, Treasury will make payments to qualified applicants within 60 days from the date the completed application is received. For property not yet placed in service at the time of the application, Treasury will review the application and notify the applicant if all eligibility requirements that can be determined before the property is placed in service have been met. If so notified, applicants must then submit, within 90 days after the date the property is placed in service, supplemental information sufficient for Treasury to make a final determination. Treasury will conduct a final review of the application at that time and make payment to qualified applicants within 60 days after it receives the supplemental information. Instructions provided on the application will indicate which portions of the application must be completed when it is initially submitted and which portions must be completed when it is supplemented.

To claim the section 1603 grant, the applicant must be the original user of the facility — that is, the owner of the facility at the time it is originally placed in service. In other words, a developer must transfer ownership to an investor before the original placed-in-service date if that investor is to obtain the section 1603 grant.[107] The section 1603 guidance adopts the IRS's long-standing rule that if the cost of the used parts contained in a facility is not more than 20 percent of the total cost of the facility (whether acquired or self-constructed), an applicant will not fail to be considered the original user of the property because the facility contains used parts.[108]

Congress stated that it intended for the section 1603 grant provision to mimic the operation of the credit under section 48.[109] For example, the amount of the section 1603 grant is not includable in gross income. However, the basis of the property is reduced by 50 percent of the amount of the grant.[110] If a section 1603 grant is paid, no section 45 or section 48 credit may be claimed for the grant-eligible property.[111] If a taxpayer had previously claimed an ITC based on progress expenditures (QPE credits) and wishes to obtain a section 1603 grant, the QPE credits are recaptured in the year the facility is placed in service.[112]

Congress instructed the Treasury secretary, in making section 1603 grants, to apply rules similar to those of section 50. In applying those rules, if the property is disposed of or otherwise ceases to be specified energy property, the Treasury secretary is to provide for the recapture of the appropriate percentage of the grant amount in such manner as he determines appropriate.[113] Also, no grant may be awarded to any federal, state, or local government (or any political subdivision, agency, or instrumentality thereof) or to any section 501(c) tax-exempt entity (a disqualified person).[114]

In fact, the recapture rules set forth in the section 1603 guidance are much more favorable than those in section 50. Under the section 1603 rules, if the applicant disposes of the property to a disqualified person or the property ceases to qualify as a specified energy property within five years from the date the property is placed in service (disqualifying event), the grant must be repaid to Treasury as follows: 100 percent of the payment must be repaid if the disqualifying event takes place within one year from the placed-in-service date; 80 percent must be repaid if the disqualifying event takes place after one year but before two years from the placed-in-service date; 60 percent must be repaid if the disqualifying event takes place after two years but before three years from the placed-in-service date; 40 percent must be repaid if the disqualifying event takes place after three years but before four years from the placed-in-service date; and 20 percent must be repaid if the disqualifying event takes place after four years but before five years from the placed-in-service date. These rules are very similar to the section 50 recapture rules.

However, the rules in the section 1603 guidance regarding what constitutes a recapture event are very different from those for the ITC. Under the section 1603 guidance, selling or otherwise disposing of the property to an entity other than a disqualified person does not result in recapture if the property continues to qualify as a specified energy property and if the purchaser of the property agrees to be jointly liable with the applicant for any recapture.[115] This is a very favorable rule.

Section 1603 grants are recaptured if the use of the property changes so that it no longer qualifies as specified energy property. For example, use of property predominantly outside the United States in a year will result in recapture. Temporary cessation of energy production will not result in recapture, as long as the property owner,

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and Reinvestment Act of 2009'' (July 2009), *available at* http://www.treas.gov/recovery/docs/guidance.pdf (section 1603 guidance). Questions regarding the section 1603 guidance can be e-mailed to Treasury at 1603Questions@do.treas.gov.

[107]The section 1603 guidance allows sale-leasebacks to be consummated within three months after the placed-in-service date, just like the ITC rules do. Moreover, as a result of the favorable recapture rules in the section 1603 guidance (see discussion below), it is less important whether the developer or the investor obtains the grant.

[108]*See* Notice 2008-60, *supra* note 23; Rev. Rul. 94-31, 1994-1 C.B. 16, *94 TNT 99-6*.

[109]Conference Report to Accompany H.R. 1, H. Rep. No. 111-16, at 621 (2009) (ARRA Conference Report).

[110]Section 48(d)(3).

[111]Section 48(d)(1).

[112]Section 48(d)(2).

[113]ARRA section 1603(f).

[114]ARRA section 1603(g).

[115]Recapture would occur in the event the property is resold to a disqualified person or ceases to qualify as a specified energy property. The applicant remains jointly liable to Treasury for the recapture amount even if the applicant no longer has control over the property.

at the time production ceases, intends to resume production. Permanent cessation of production will result in recapture. Permanent cessation of production because of a natural disaster will not result in recapture unless the property is replaced with property for which a section 1603 payment is allowed. Replacement would be treated as occurring if the applicant uses section 1033 to avoid gain recognition.

For a hydropower property where incremental hydropower production has been licensed by FERC, recapture will not take place if actual incremental increases in energy production do not occur that year because of environmental or regulatory factors. Recapture for a hydropower facility installed on a nonhydroelectric dam will occur if the FERC license is surrendered or repealed based on significant changes in water surface elevation caused by operation of the facility. If the amount of the grant depends on the percentage of electricity produced from biomass (in the case of closed-loop and open-loop biomass facilities) or the energy efficiency percentage (in the case of combined heat and power system property using biomass) and the percentage is reduced, a proportionate percentage of the property ceases to qualify as specified energy property. The applicable percentages for the year beginning on the placed-in-service date and each succeeding year in the recapture period will be determined annually. No additional grant will be allowed in a subsequent year in which the percentage increases.

B. The Facility

ARRA itself provided very little guidance regarding what property qualifies for the ITC or the section 1603 grant. Under section 48(a)(5)(D), property eligible for the ITC is tangible personal or other tangible property (not including a building or its structural components) on which depreciation or amortization is allowable, but only if the property is used as an integral part of the qualified facility. The ARRA conference report adds that in the case of a wind facility, for example, the conferees intend that only property eligible for five-year depreciation under section 168(e)(3)(B)(vi) be treated as credit-eligible energy property under the election.[116] Similarly, for section 1603 grants, the conference report merely provides that qualifying property must be depreciable or amortizable to be eligible for a grant.[117] However, the section 1603 guidance added a good amount of guidance to fill in the gaps regarding some, but not all, types of facilities.

1. In general. The section 1603 guidance sets forth rules for basis inclusion that are generally helpful. It states that property eligible to receive grants is ''specified energy property.'' Specified energy property includes only tangible property (not including a building) that is an integral part of the facility. The basis of property is determined in accordance with the general rules for determining the basis of property for federal income tax purposes. Thus, the basis of property generally is its cost, unreduced by any other adjustment to basis, such as depreciation, and it includes all items properly included by the taxpayer in the depreciable basis of the property, such as installation costs and the cost for freight incurred in construction of the specified energy property. The tangible property is tangible personal property and other tangible property as defined in reg. section 1.48-1(c) and (d). Specified energy property is property for which depreciation (or amortization in lieu of depreciation) is allowable. Qualified property includes only tangible property that is both used as an integral part of the activity performed by the qualified facility and located at the site of the qualified property. Property is an integral part of a qualified facility if the property is used directly in the qualified facility, is essential to the completeness of the activity performed in that facility, and is located at the site of the qualified facility. Most of this guidance comes straight from general basis rules that have long been used for the ITC and depreciation deductions.

For qualified property that generates electricity, qualified property includes storage devices, power conditioning equipment, transfer equipment, and parts related to the functioning of those items. It does not include any electrical transmission equipment, such as transmission lines and towers, or any equipment beyond the electrical transmission stage, such as transformers and distribution lines.

Helpfully, the section 1603 guidance provides that roadways and paved parking areas located at the qualified facility and used to transport material to be processed at the facility or equipment to be used in maintaining and operating the facility are integral to the activity performed there. Roadways or paved parking lots that provide solely for employee and visitor vehicle traffic are not an integral part of a qualified facility. Most taxpayers have agreed that these are the rules for investment tax purposes, but on audits, IRS agents have not always agreed.[118]

Less helpfully, as noted above, the section 1603 guidance provides that to qualify, property must be located at the site of the qualified facility. This could have some implications for facilities, such as landfill gas facilities, geothermal facilities, and biomass facilities, that involve property that is not always at the same site.

2. Wind facilities. According to the IRS, the term ''facility'' in the case of a wind facility for purposes of the section 45 credit means the wind turbine (which includes blades, a mechanical gear box, a generator, and a control and communication mechanism), together with the tower on which the wind turbine is mounted and the pad on which the tower is situated. Each wind turbine, together with its tower and supporting pad, is a separate facility.[119] The definition excludes facility support and delivery assets such as transformers, on-site power collection systems, monitoring and meteorological equipment, and site improvements such as roadways and fencing. This definition appears narrower than the definition in the ARRA conference report, which provides

[116] ARRA Conference Report, *supra* note 109, at 617.

[117] *Id.* at 621.

[118] *See also* Notice 2008-60, *supra* note 23, for a narrower definition of what qualifies as part of a biomass facility.

[119] Rev. Rul. 94-31, *supra* note 108; LTR 200334031 (May 19, 2003), *Doc 2003-19151, 2003 TNT 164-14*.

that in the case of a wind facility the conferees intend that property eligible for five-year depreciation under section 168(e)(3)(B)(vi) be treated as credit-eligible energy property under the election.[120] In 2008 the House passed an energy tax bill that would have imposed a cap on the section 45 credit based in part on investment in a facility.[121] The bill included a concept of shared qualified property, which would have clarified this issue. But ARRA does not contain any similar provision.

However, the section 1603 guidance appears to view qualifying property at a wind farm more broadly than the definition of a facility in Rev. Rul. 94-31. The facility definition from Rev. Rul. 94-31 becomes, in the section 1603 guidance, the definition of a unit of property. Also, the section 1603 guidance adds more units of property. For example, the section 1603 guidance states that a control system on a wind farm that optimizes the operation of the farm is a unit of property separate from the wind turbines. This language appears to recognize that these units of property are part of the qualified facility. The section 1603 guidance goes on to provide that the owner of multiple units of property that are located at the same site and that will be operated as a larger unit may elect to treat the units (and any property, such as a computer control system, that serves some or all such units) as a single unit of property for purposes of determining the beginning of construction and the placed-in-service date. This language is helpful both for this purpose and for purposes of meeting various placed-in-service and beginning-of-construction tests.

Moreover, as noted above, qualified property includes storage devices, power conditioning equipment, transfer equipment, and parts related to the functioning of those items. It also includes some roadways and parking areas. For qualified property that generates electricity, the definition similarly includes storage devices, power conditioning equipment, transfer equipment, and parts related to the functioning of those items, but it does not include any electrical transmission equipment, such as transmission lines and towers, or any equipment beyond the electrical transmission stage, such as transformers and distribution lines. The guidance clearly points to a broader definition of what qualifies than is provided in the narrow definition of a facility in Rev. Rul. 94-31.

3. Geothermal facilities. H.R. 7060 (as passed by the House) contained a special basis rule for geothermal facilities for purposes of calculating an annual limitation on the electricity production credit. It provided that, in the case of any qualified facility using geothermal energy to produce electricity, the basis of the facility was to be determined as though intangible drilling and development costs described in section 263(c) were capitalized rather than expensed. This provision did not appear in ARRA.

However, the section 1603 guidance contains a good bit of assistance regarding these types of costs. Under the guidance, property that is integral to a geothermal facility includes equipment that transports geothermal steam or hot water from a geothermal deposit to the site of ultimate use. This includes components of a heating system, such as pipes and ductwork, that distribute within a building the energy derived from the geothermal deposit and, if geothermal energy is used to generate electricity, this includes equipment that transports hot water from the geothermal deposit to a power plant.

Costs that will be deducted for federal income tax purposes in the year in which they are paid or incurred are not includable in the basis on which the payment is determined. For geothermal property, if intangible drilling and development expenses will be deducted by the applicant, no payment will be allowed on the costs that will be deducted as intangible drilling and development expenses. If the applicant will capitalize intangible drilling and development expenses, only those costs that may be recovered through depreciation are includable in the basis on which the payment is allowed. However, if the applicant makes an election under section 59(e) to deduct intangible drilling and development costs over 60 months, the payment is based on the amount to which the election applies because the effect of section 59(e) is to treat those costs as amortizable.

4. Biomass facilities. For biomass facilities, the IRS has concluded that an open-loop biomass facility is a power plant consisting of all components necessary for the production of electricity from open-loop biomass (and, if applicable, other energy sources). Thus, a qualified open-loop biomass facility includes all burners and boilers (whether or not burning open-loop biomass), any handling and delivery equipment that supplies fuel directly to and is integrated with those burners and boilers, steam headers, turbines, generators, and all other depreciable property necessary for the production of electricity.[122] The facility does not include (i) property used for the collection, processing, or storage of open-loop biomass before its use in the production of electricity; (ii) transformers or other property used in the transmission of electricity after its production; or (iii) ancillary site improvements, such as roadways and fencing, that are unnecessary for the production of electricity. However, it is unclear what is meant by (i) of the exclusion. Under section 168(e)(B)(vi)(II) and former section 48(l)(3)(A)(vii), it is clear that a biomass facility includes equipment used for the unloading, transfer, storage, reclaiming from storage, and preparation at the point of use of an alternative substance for use at the facility. It is uncertain what the IRS was trying to exclude.

The section 1603 guidance is helpful here as well. It provides that in the case of an open-loop biomass, closed-loop biomass, or municipal solid waste facility, an integral part of the qualified facility includes property used at the plant site for unloading, transfer, storage, reclaiming from storage, or preparation (shredding, chopping, pulverizing, or screening) of the material to be processed at the plant. However, similar equipment located away from the plant site is not an integral part of

[120]*See* reg. section 1.48-9(e) for a definition of wind energy property.

[121]H.R. 7060, as passed by the House on September 26, 2008.

[122]Notice 2008-60, *supra* note 23.

the qualified facility. Similarly, slurry pipelines, trucks, railroad cars, and barges that transport open-loop biomass, closed-loop biomass, or municipal solid waste to the qualified facility are not an integral part of that facility. Thus, the section 1603 guidance again sets forth a broader standard for what qualifies for a section 1603 grant than does the standard used by the IRS in defining the facility under pre-ARRA rules.

5. Qualified hydropower facilities. The section 1603 guidance provides some help in determining what constitutes a qualified hydroelectric facility. For incremental hydropower, only property related to the efficiency improvements and to additions to capacity to which the incremental hydropower production is attributable can qualify as specified energy property eligible for a section 1603 payment. When that test is met, the eligible basis of a qualified hydropower facility producing incremental hydropower includes the entire cost of the modification, even though only a portion of the power produced from the modification is attributable to that modification.

As discussed above, qualified hydropower facilities also include some hydropower producing projects installed on nonhydroelectric dams that were placed in service before August 8, 2004, and did not produce hydroelectric power on that date. Only property related to the turbines or other generating devices added to the facility to produce hydroelectric power can qualify as specified energy property that is eligible for a section 1603 payment.

6. Landfill gas facilities. Historically, many companies have claimed the section 29 credit for producing fuel from a nonconventional source. In those cases, the credit was claimed on the sale of the gas recovered, not on the sale of electricity from a generating unit using the gas as a fuel source. Thus, ownership of the landfill gas facility and of the electric generating facility generally has been split so that a sale of gas could be made to an unrelated person. Now, with the credit being placed under section 45, the credit is claimed on the sale of electricity rather than on the sale of the gas to the generating unit. That means ownership of the landfill gas facility and of the electric generating facility can be combined. The issue for a landfill gas facility is whether ownership can be separated. For example, can a municipality (or other person that could not benefit from the section 45 credit) retain ownership of the landfill gas facility? The IRS has hinted in two recent private rulings issued to rural electric cooperatives that, in fact, the facility does not include the wells, etc.[123]

The answer to this question has ramifications that can either benefit or harm the taxpayer. For example, if the facility is just the facility that generates electricity (and not wells or equipment to clean up and transport the gas), the taxpayer would have to make a lesser investment to claim the section 45 credit. Moreover, it appears that the section 45 credit would not be reduced if construction of the wells or the facilities used to clean the landfill gas were financed with tax-exempt bonds.

However, excluding the wells and cleanup and transportation facilities from the qualified facility would reduce the amount of ITC or section 1603 grant. Unfortunately, the section 1603 guidance did not provide any guidance on this issue.

C. Choosing Between the Options

There are several considerations that must be taken into account in determining whether to claim the section 45 credit, the ITC, or a grant. In March 2009 the National Renewable Energy Laboratory published a study by the Ernest Orlando Lawrence Berkeley National Laboratory that looked at two project-specific factors — installed project costs and expected capacity factor (production) — and used a simple cash flow model to quantitatively analyze the trade-off between the section 45 credit and the ITC (or equivalent cash grant) for different technologies. The study concluded that only two of the five modeled technologies clearly favored one credit over the other: Open-loop biomass received more value from the ITC than from the section 45 credit in every combination of installed cost and capacity factor modeled, while geothermal overwhelmingly received more value from the section 45 credit.

Beyond these quantitative factors are several other factors to be taken into consideration. First, the ITC or the section 1603 grant provide money up front rather than over 10 years. This clearly provides cash flow benefits.

The ITC can be claimed against the AMT. Section 45 credits can be used against the AMT only for the first four years. And, of course, the section 1603 grant does not require any income tax liability.

For investor-owned utilities, ITCs and the section 1603 grants are subject to the tax normalization rules, while section 45 credits are not.

The section 45 credits can be reduced for grants,[124] tax-exempt bonds, subsidized energy financing, and other credits. Most of these rules do not apply to the ITC and section 1603 grants. Section 1103 of ARRA repealed prior-law limitations on the ITC for subsidized energy financing and tax-exempt bonds. There was never a general provision disallowing the ITC with respect to most other types of tax credits. For grants, there is no specific prohibition against claiming an ITC simply because a grant is available. However, if the grant is excludable from income as a nonshareholder contribution to the capital of a corporation under section 118(a), then the basis of any property acquired with that grant during the 12-month period beginning on the day the contribution is received is reduced by the amount of the contribution.[125] This would reduce the ITC or section 1603 grant amount.

The tax laws for contributions to capital are complex. For example, the IRS maintains that section 118(a) cannot apply to a contribution to a noncorporation. A test for when a grant is treated as a nontaxable contribution to capital of a corporation has been articulated by the

[123]*See* LTR 200844008, *supra* note 94; LTR 200845030, *supra* note 94.

[124]Grants for this purpose do not include section 1603 grants.

[125]Section 362(c)(2).

Supreme Court in *United States v. Chicago, Burlington & Quincy Railroad Co.* as follows:

> [1] It certainly must become a permanent part of the transferee's working capital structure. [2] It may not be compensation, such as a direct payment for a specific, quantifiable service provided for the transferor by the transferee. [3] It must be bargained for. [4] The asset transferred foreseeably must result in benefit to the transferee in an amount commensurate with its value. [5] And the asset ordinarily, if not always, will be employed in or contribute to the production of additional income and its value assured in that respect.[126]

It is generally favorable to a taxpayer that a grant be treated as a nontaxable contribution to a corporation under section 118(a). However, in the case of a grant for a facility that would qualify for a 30 percent ITC or a section 1603 grant, the opposite is true; it is generally preferable that the grant be treated as taxable income so it does not reduce the taxpayer's basis in the asset. Also, the grants at issue here are never section 1603 grants. Section 1603 grants are never taxable income, and section 362(c)(2) does not apply to them.[127] A taxpayer cannot claim a section 45 credit or an ITC if it elects to obtain a section 1603 grant.[128]

The depreciable basis of property is reduced by 50 percent if the taxpayer claims ITCs or the section 1603 grant, but there is no basis reduction if the taxpayer claims section 45 credits. By contrast, however, if a project received subsidized energy financing or is financed by tax-exempt bonds, the amount of any section 45 credits is reduced, but that financing has no impact on claiming ITCs or section 1603 grants.

If the taxpayer chooses to claim ITCs, the owner must keep property for five years or the credits will be recaptured in whole or in part. There is no such recapture provision in the section 45 credit rules. In fact, as noted above, the section 45 credit can be claimed by subsequent purchasers of the facility over the 10-year credit period. For the section 1603 grants, there is a recapture rule, but it is much more lenient than the rule for the ITC. As discussed above, selling or otherwise disposing of the property to an entity other than a disqualified person does not result in recapture if the property continues to qualify as a specified energy property and if the purchaser of the property agrees to be jointly liable with the applicant for any recapture.

The section 45 credit rules generally do not allow anyone but the owner to make sales and claim the credits.[129] Lease financing is available for the ITC and the section 1603 grants.

Obviously, there are a lot of considerations involved, and a choice of which regime to follow will require careful planning.

IV. Placed-in-Service Rules

Throughout this discussion, there has been mention of placed-in-service dates. One of the key requirements for qualification of a facility for the section 45 credit, the ITC, and the section 1603 grant is that it be placed in service for tax purposes at the appropriate time. However, the code does not provide a definition of placed in service, and there are no regulations providing such a definition for purposes of the section 45 credit, the ITC, or the section 1603 grant. In a letter ruling, the IRS looked to the depreciation and ITC rules for guidance about when a facility is placed in service for purposes of the section 45 credit.[130] Under those rules, property is placed in service in the tax year the property is placed in a condition or state of readiness and availability for a specifically assigned function.[131] In general, the following factors are considered in determining placed-in-service dates for power plants:

1. approval of required licenses and permits;
2. passage of control of the facility to the taxpayer;
3. completion of critical tests;
4. commencement of daily or regular operations; and
5. synchronization into a power grid for generating electricity to produce income.[132]

Note that if a facility operates on a regular basis but does not produce the projected output, it may still be considered placed in service.[133] If a facility is merely operating on a test basis, it is not placed in service until it is available for service on a regular basis.[134] However, in some situations property has been found to be placed in service even though it is not operating if the fact that the facility is not operating is beyond the taxpayer's control.[135]

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[126]412 U.S. 401 (1973).

[127]Section 48(d)(3).

[128]Section 48(d)(1).

[129]There is an exception to this rule for open-loop biomass facilities (section 45(d)(3)(C)) and for closed-loop biomass facilities modified to co-fire with coal, other biomass, or both (section 45(d)(2)(C)(ii)).

[130]LTR 200334031, *supra* note 119.

[131]*See* reg. sections 1.46-3(d)(1)(ii) and 1.167(a)-11(e)(1)(i).

[132]*See* Rev. Rul. 76-256, 1976-2 C.B. 46, and Rev. Rul. 76-428, 1976-2 C.B. 47; *Oglethorpe Power Corp. v. Commissioner*, T.C. Memo. 1990-505.

[133]*Sealy Power, Ltd v. Commissioner*, 46 F.3d 382 (5th Cir. 1995), *Doc 95-2584*, *95 TNT 44-73*, *nonacq.*; AOD 1995-10, 1995-2 C.B. 2, *Doc 95-8634*, *95 TNT 182-39*; Rev. Rul. 84-85, 1984-1 C.B. 10.

[134]*Consumers Power v. Commissioner*, 89 T.C. 710 (1987).

[135]*See* reg. section 1.46-3(d)(2)(ii) (operational farm equipment acquired during the tax year is placed in service even though it is impracticable to use that equipment for its specifically assigned function in the taxpayer's business of farming until the following year); *Sears Oil Co. v. Commissioner*, 359 F.2d 191 (2d Cir. 1966) (a barge delivered to the taxpayer in the fall of 1957 in New York State for final outfitting, but not put into actual use until May 1958 because the barge was frozen in a canal, was found to be placed in service); *SMC Corp. v. United States*, 675 F.2d 113 (6th Cir. 1982) (plaintiff's crane and shredder were placed in service when operational in the fiscal year ending July 31, 1975, despite the absence of electrical power).

As discussed above, according to the IRS, the term ''facility'' in the case of a wind facility for purposes of the section 45 credit means the wind turbine (which includes blades, mechanical gear box, generator, and a control and communication mechanism), together with the tower on which the wind turbine is mounted and the pad on which the tower is situated. Each wind turbine, together with its tower and supporting pad, is a separate facility.[136] The definition excludes facility support and delivery assets such as transformers, on-site power collection systems, monitoring and meteorological equipment, and site improvements such as roadways and fencing.

Also, the IRS has concluded that an open-loop biomass facility is a power plant consisting of all components necessary for the production of electricity from open-loop biomass (and, if applicable, other energy sources). Thus, a qualified open-loop biomass facility includes all burners and boilers (whether or not burning open-loop biomass), any handling and delivery equipment that supplies fuel directly to and is integrated with those burners and boilers, steam headers, turbines, generators, and all other depreciable property necessary for the production of electricity.[137] The facility does not include (i) property used for the collection, processing, or storage of open-loop biomass before its use in the production of electricity; (ii) transformers or other property used in the transmission of electricity after its production; or (iii) ancillary site improvements, such as roadways and fencing, that are not necessary for the production of electricity. Each power plant that is operated as a separate integrated unit is treated as a separate facility.[138]

However, as discussed above, in the section 1603 guidance Treasury used much broader definitions of what constitutes qualified property. Also, the guidance allows the taxpayer flexibility in determining what is an appropriate unit of property. Under the section 1603 guidance, the owner of multiple units of property that are located at the same site and that will be operated as a larger unit may elect to treat the units (and any property, such as a computer control system, that serves some or all the units) as a single unit of property for purposes of determining the beginning of construction and the date the property is placed in service. For example, the owner of a wind farm may treat as a single unit a wind farm that will consist of 50 turbines, their associated towers, their supporting pads, a computer system that monitors and controls the turbines, and associated power condition equipment.[139]

These conclusions regarding the term ''facility'' can have several different implications. A narrower definition could prove useful if the required placed-in-service dates for the section 45 credit, the ITC, or the section 1603 grant are not extended and it proves necessary to place a facility in service by a set date.

Establishing the placed-in-service date is also important in determining when the depreciation period for property begins. In general, a taxpayer cannot begin depreciating property until it is placed in service for tax purposes under the above tests. Again, an earlier placed-in-service date is preferable because it allows depreciation of the property to begin earlier.

The important placed-in-service date is the date on which the facility is originally placed in service by the taxpayer. A facility can qualify as originally placed in service even though it contains some used property if the fair market value of the used property is not more than 20 percent of the facility's total value (the cost of the new property plus the value of the used property).[140] This original placed-in-service date determines who can claim an ITC or section 1603 grant.

For the section 45 credit, a subsequent transferee of the facility (including the transferee following a technical termination or a partnership reformation under section 708) will be able to claim the credit even though the transferee is not the original owner; however, the credit periods will continue to run from the date the facility is originally placed in service.[141] As a corollary, once a facility is considered placed in service for purposes of the section 45 credit, the credit period will continue to run even if changes are made to the facility, as long as the value of the original property is more than 20 percent of the facility's total value.

V. Depreciation of Renewable Resource Facilities

Another large tax benefit available to an alternative energy facility is the ability to claim depreciation deductions on the cost of the facility. In many cases, the period over which a facility can be depreciated is much shorter than the depreciation period for a standard coal- or gas-fired electric generating facility. Under the general tax depreciation rules, property is assigned to a recovery class,[142] which determines the length of time and the method for depreciating the property. Property is usually assigned to a recovery class based on the class life the IRS gives the property.[143] Some types of property, however, are specially assigned to recovery classes independent of their class lives.[144]

Most electric generating facilities (other than buildings and some land improvements that may be subject to longer depreciation) are assigned to recovery classes making them depreciable on a 150 percent declining

[136]Rev. Rul. 94-31, *supra* note 108; LTR 200334031, *supra* note 120.

[137]LTR 200837028, *supra* note 72.

[138]Notice 2008-60, *supra* note 23.

[139]In cases when the applicant treats multiple units of property as a single unit, failure to complete the entire planned unit will not preclude receipt of a section 1603 grant. In the example in the text, if only 40 of the planned 50 turbines were placed in service by the credit termination date, an otherwise eligible applicant would be eligible for a payment based on the 40 turbines placed in service.

[140]Rev. Rul. 94-31, *supra* note 108; Notice 2008-60, *supra* note 23; section 1603 guidance, *supra* note 106.

[141]Rev. Rul. 94-31, *supra* note 108; LTR 200318066, *supra* note 65; LTR 200142018, *supra* note 65.

[142]Section 168(c).

[143]Section 168(e). Note that the portion of any property that has been financed with tax-exempt bonds will be depreciated at a slower rate. Section 168(g)(1)(C).

[144]Section 168(e)(3).

balance basis: either over a 15-year period for combustion turbine plants and nuclear generating stations (each of which has been given a 20-year class life); or over a 20-year period for steam-powered plants (28-year class life), combustion turbine plants operated in a combined cycle with a conventional steam unit (28-year class life), and hydroelectric power plants (50-year class life).[145]

Some waste-to-energy facilities, however, are entitled to faster write-offs. For example, when a facility will produce heat from solid waste or biomass and use the steam or other solid waste or biomass fuel to make electricity, the electric generation equipment is depreciated as previously described, while the boiler, waste-handling equipment, and other such equipment can be depreciated on a 200 percent declining balance basis over only seven years (10-year class life).[146]

Also, some types of facilities using alternative sources of energy can be depreciated on a 200 percent declining balance basis over five years, regardless of the class life to which the property may be assigned. Five-year property includes facilities generating electricity that use wind or geothermal power.[147] Five-year property also includes the following equipment in a facility identified as a qualifying small power production facility under the Federal Power Act, as in effect on September 1, 1986:

- a boiler whose primary fuel is an ''alternative substance'';
- a burner, including necessary on-site equipment to bring the alternative substance to the burner when the combustor is other than a boiler, if the primary fuel for the burner will be an alternative substance;
- equipment for converting an alternative substance into any synthetic solid fuel or into alcohol for fuel, if the primary source of energy for the facility producing the alcohol is not oil or natural gas, or a product of oil or natural gas;
- pollution control equipment required by federal, state, or local law installed on or in connection with the previously described equipment; and
- equipment used for unloading, transferring, storing, reclaiming from storage, and preparing at the point of use an alternative substance for use in the previously described equipment.

An alternative substance is considered to be any substance other than oil, natural gas, coal (including lignite), or any product of the preceding, or any inorganic substance. In a recent ruling, the IRS concluded that these portions of a facility that generates a facility burning a combination of municipal solid waste and open-loop biomass where more than 50 percent of the matter was organic materials constitutes five-year property based on this provision.[148]

The limitation that the facility be a qualifying small power production facility within the meaning of the Federal Power Act, as in effect on September 1, 1986, can be significant.[149] The EPA changed the rules for the types of owners of these types of facilities, but the tax code did not change. Of particular importance, this affects the ability of regulated electric utilities and their affiliates to claim five-year depreciation.

VI. Solid Waste Disposal Bonds

There also may be limited opportunities for owners of facilities generating electricity from renewable resources to finance parts of their facilities with tax-exempt debt. But, as discussed above, the use of tax-exempt debt to finance a facility can reduce the availability of the section 45 credit (although there is no effect if the taxpayer elects to claim an ITC or a section 1603 grant). In some cases, parts of waste-to-energy facilities can be financed on a tax-exempt basis as facilities for the removal of solid waste.[150] The portions of a solid waste disposal facility that can be financed on that basis are the portions relating to processing the waste to the point at which it is converted into a marketable product.[151] For example, in many cases burning the waste produces steam. That steam is then used to generate electricity. In most situations, the steam is a marketable product, so production of steam creates a marketable product and the facilities that burn steam-producing waste may be financed with tax-exempt debt. However, the equipment to further process this steam (a salable product) to electricity is ineligible for tax-exempt debt. Also, although tax-exempt debt generally can no longer be used to finance pollution control facilities, portions of waste removal facilities may constitute facilities for the removal of solid waste, and thus may be financed on that basis.[152]

Finally, if the facility is narrowly defined as the generating facility, in some cases for the facility producing fuel may be owned by a governmental entity that could issue tax-exempt bonds as governmental bonds. An example would be landfill gas facilities, if the taxpayer can claim the section 45 credit simply by owning the generation facility.

VII. Conclusions

More and more facilities are being built in this country to generate electricity from renewable resources. Federal law encourages it. Some state laws demand it. And good business practice requires it as well. Fortunately, tax incentives are making the cost of building those facilities more affordable and, in some cases, quite a good deal.

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[145]Rev. Proc. 87-56, 1987-2 C.B. 674.
[146]*Id.* at 686, asset class 49.5.
[147]Solar facilities also qualify as five-year property.
[148]LTR 200837028, *supra* note 72.
[149]*See* section 168(e)(3)(B)(vi)(II).
[150]Section 142(a)(6).
[151]Temp. reg. section 17.1.
[152]LTR 9549006 (Dec. 8, 1995), *95 TNT 240-22*. *See* LTR 9252011 (Sept. 24, 1992).