

**Internal Revenue Service**

Department of the Treasury  
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PLR-135520-11  
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**LEGEND:**

Taxpayer

Parent

Company\_A

Company B

State A

State B

State C

City

County 1

County 2

Region

Grid

Project

Date 1

Date 2

Date 3

Date 5

Month 1

Month 2

a

b

c

d

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Dear \_\_\_\_\_ :

This is in response to your request for rulings, submitted by your authorized representative, concerning the federal income tax consequences of the transaction described below. The facts as represented by the Taxpayer are as follows.

Taxpayer is a State A limited partnership that is a disregarded entity (the Project Company) indirectly wholly-owned by Parent. Parent is a \_\_\_\_\_ utility holding company headquartered in City of State B that owns a megawatts of generating assets through regulated subsidiaries, another b megawatts of generating assets in the United States through its unregulated affiliates, Company A and another c megawatts of generating assets in Region A.

Parent files a consolidated federal income tax return.

The Project Company owns a d megawatt wind farm in County 1 and County 2 in State C called Project. The project was completed in Date 1. It used three different types of wind turbines. Phase 1a consists of e type f megawatt turbines for a total capacity of g megawatts. Phase 1B consists of h Company B i megawatt turbines and has a capacity of j megawatts. Phase 1C is \_\_\_\_\_. The Project Company

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received Treasury cash grants on phases 1A and 1B. Parent claimed an investment tax credit on phase 1C.

The electricity from the project is mainly being sold on a merchant basis to Grid. The Project Company bids into the day-ahead and real-time markets to supply electricity. It has a partial financial hedge with an unrelated third party through Date 2 that helps set a price floor on the electricity; there are physical deliveries under the hedge but the electricity may be supplied from the project or purchased on a spot basis in the market.

The project is in an area of State C where there is strong wind but insufficient transmission capacity to bring all the electricity from the many wind farms in the area on a consistent basis to the population centers in different areas of State C. Like other wind farms in the area, the project suffers periodic "curtailments" when it is unable to transmit its electricity due to transmission constraints. The project operated in Date 3 at a gross capacity of l %, but net capacity supplied to the grid was only m % due to curtailments.

The Project Company is planning to install a large storage device whose primary use will be to store electricity to work around transmission constraints and shift deliveries from off-peak hours, when wind farms generate a majority of their electricity, to peak hours in order to earn higher rates. The storage device will also enable the Project Company to bid into the day-ahead ancillary services markets in Grid.

The storage device will have n megawatts of capacity and the ability to store up to o megawatts of electricity for up to h minutes. It is comprised of a series of cells of advanced lead batteries and is expected to sit on the low-voltage side of the project substation and to cost approximately p dollars. A portion of the cost will be paid with a grant from the US Department of Energy under a grant program for electricity storage demonstration projects authorized by division A of the American Recovery and Reinvestment Act of 2009. The grant will be reported by Company as taxable income. Installation of the storage device is expected to start in Month 1 or Month 2 of Date 4 and be completed in Date 5.

The storage device will enable the Project Company to bid to provide capacity to the grid, specifically to increase or reduce output from the project within seconds of receiving notice, also known as "regulation up" and "regulation down" services. The electricity grid operates at a frequency of q cycles per second (Hz) when the supply of electricity and the demand for it, or load, are in balance. If the supply increases in relation to load, then the frequency increases. This causes air conditioners, computers, lights, motors and other electrical equipment drawing power from the grid to run faster and overheat. If the supply is short in relation to load, then the equipment slows down. To avoid problems resulting from imbalances in supply and demand, the grid relies on electricity generators who have bid to provide regulation services to increase or reduce

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output from their power plants within seconds of receiving notice. It is difficult for wind farms to achieve this because of their dependence on the wind. By adding a storage device, the wind farm puts itself in a position to be able to adjust to grid signals in the same way as other power plants. By bidding into the regulation services market, the project is offering to discharge electricity from the battery or to allow the grid to shed electricity to the battery. The project will participate in hour intervals in the regulation market by following a signal to ramp up or down every four seconds as needed. Company estimates that  $r$  % to  $s$  % of electricity used to charge the battery annually will come from the grid as opposed to the project. Roughly the same percentage of project revenue is expected to derive from supplying ancillary services in addition to electricity.

At various times, Grid has considered requiring wind farms to “de-rate” the maximum output capacity as a means of forcing them to provide regulation capability. In other words, the wind farm would be required to reduce its output each hour as a form of self regulation. For example, if the projected output is  $t$  megawatts, the wind farm might bid only  $u$  megawatts to leave room to be able to ramp up or down as needed. The storage device will allow the project to provide regulation services without having to be de-rated.

Depending on market prices and Grid protocols, the project may also qualify to bid other ancillary services. The project has not decided whether it will do so.

These other ancillary services may include spinning reserves, non-spinning reserves, voltage support, ramp control and black start. Spinning reserves occur where a generator agrees to keep additional capacity idling, to the extent it is not dispatched by the grid, so that the generator can ramp up to meet electricity shortages with  $v$  to  $w$  minutes. Non-spinning reserves occur where a generator does not keep a power plant running, but is in a position to start delivering additional electricity within an hour. In this case, additional electricity would come from the battery. Voltage support would require delivery or absorption of “VARs” or reactive power. Changes in voltage can cause equipment like air conditioners to draw additional current, which leads to further voltage variation. Too much variation can lead to electricity outages on the grid. The battery can be used to absorb or release reactive power as wind speeds fluctuate, providing grid stability in areas with significant wind penetration. Ramp control may be called for if wind output fluctuates above schedule too quickly. In some cases, the wind turbines are required to adjust the pitch of wind turbine blades or curtail operations to conform more closely to scheduled power output if wind speeds increase quickly. This can result in lost revenue. A battery gives the wind farm the option of not pitching blades by storing power from fast ramp periods in the battery. Black-start capability is the idea that a project stands ready to supply electricity to the grid to help the grid restart after a blackout. It can only be provided by power plants that have an outside electrical supply, such as a diesel generator or large energy storage device.

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## RULINGS REQUESTED

The Taxpayer has requested the Service to rule that:

- (i) The storage device will be considered part of the "qualified property" at a "qualified investment credit facility" within the meaning of § 48(a)(5) and, therefore, an investment credit may be claimed on its full cost; and,
- (ii) The investment credit claimed on the storage device will be subject to recapture pursuant to the recapture provisions described in §§ 50(a)(1)(A) and (B) for property disposed of or that ceases to qualify for progress expenditures.

## LAW AND ANALYSIS

Section 48(a)(5)(A)(i) and (ii) of the Code provide that in the case of any qualified energy property which is part of a qualified investment credit facility, such property shall be treated as energy property and that the energy percentage with respect to such property is 30 percent.

Section 48(a)(5)(C)(i) provides that the term qualified energy facility includes a wind facility (described in § 45(d)(1) of the Code so long as the facility is placed in service in 2009, 2010, 2011, or 2012.

Section 1.48-9(a)(2) of the regulations provides that in order to qualify as "energy property" under § 48 of the Code, property must be depreciable property with an estimated useful life when placed in service of at least three years and constructed after certain dates.

Sections 1.48-9(e)(1) and (2) of the regulations provide as follows:

**(e) Wind energy property--(1) In general.** Energy property includes wind energy property. Wind energy property is equipment (and parts related to the functioning of that equipment) that performs a function described in paragraph (e)(2) of this section. In general, wind energy property consists of a windmill, wind-driven generator, storage devices, power conditioning equipment, transfer equipment, and parts related to the function of those items. Wind energy property does not include equipment that transmits or uses electricity derived from wind energy. In addition, limitations apply similar to those set forth in paragraph (d)(5), (6), and (8) of this section. For example, if equipment is used by both auxiliary equipment and wind energy equipment, such equipment is wind energy property only if its use of energy other than wind energy does not exceed 25 percent of its total energy input in an annual measuring period and only to the extent of its basis or cost allocable to its use of wind energy during an annual measuring period.

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**(2) Eligible functions--** Wind energy property is limited to equipment (and parts related to the functioning of that equipment) that—

(i) Uses wind energy to heat or cool, or provide hot water for use in, a building or structure, or

(ii) Uses wind energy to generate electricity (but not mechanical forms of energy).

Section 1.46-3(f)(1) of the regulations, provides, in part that in the case of a partnership, each partner shall take into account separately, for his taxable year with or within which the partnership taxable year ends, his share of the basis of partnership new section 38 property and his share of the cost of partnership used section property placed in service by the partnership during such partnership taxable year. Each partner shall be treated as the taxpayer with respect to his share of the basis of partnership new section 38 property and his share of the cost of partnership used section 38 property.

Section 50(a)(1)(A) of the Code provides that if investment credit property is disposed of, or otherwise ceases to be investment credit property with respect to the taxpayer, before the close of the recapture period, then the tax under this chapter is increased by the recapture percentage multiplied by the credit taken for all earlier years as to the property. Section 50(a)(1)(B) of the Code provides that the recapture percentage begins at 100 percent if the property is disposed of or ceases to be section 38 property during the first full year after it is placed in service. The percentage decreases by 20 percentage points every succeeding full year. No investment credit is recaptured after the fifth full year.

Section 1.47-1(h) of the regulations generally provides, in part, that a recapture determination is required for the investment credit attributable to the energy percentage (energy credit) if property is (1) disposed of or (ii) otherwise ceases to be energy property with respect to the taxpayer.

Section 1.47-6(a)(1) of the regulations provides, in part, that if a partnership disposes of any partnership section 38 property (or if any partnership section 38 property ceases to be section 38 property in the hands of the partnership) before the close of the estimated useful life which was taken into account in computing qualified investment with respect to such property, a recapture determination will be made with respect to each partner who is treated as a taxpayer with respect to such property. Each such recapture determination is made with respect to the share of the basis (or cost) of such property taken into account by such partner in computing his qualified investment.

In the instant case, the regulations clearly provide that wind energy property includes a storage device. The device will be charged, meaning electricity will be stored, when the wind speed ramps up and discharged when it falls. The main function of the storage device is to manage deliveries of wind electricity to the grid to an appropriate time. The storing of electricity for use at a later time is a classic use of a

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battery (and hence a storage device). Although the device will be used to store electricity to be used at another time, the device does not constitute transmission equipment. Further, the storage device will not be used by any property other than the wind farm and should, therefore, not constitute auxiliary equipment.

Accordingly, we conclude that:

(i) The storage device will be considered part of the "qualified property" at a "qualified investment credit facility" within the meaning of § 48(a)(5) and, therefore, an investment credit may be claimed on its full cost and,

(ii). The investment credit claimed on the storage device will be subject to recapture pursuant to the recapture provisions described in §§ 50(a)(1)(A) and (B) for property that is disposed of or that ceases to qualify for progress expenditures.

In accordance with the Power of Attorney on file with this office, we are sending a copy of this letter to your authorized representatives. A copy of this ruling must be attached to any income tax return to which it is relevant. Alternatively, taxpayers filing their returns electronically may satisfy this requirement by attaching a statement to their return that provides the date and control number of the letter ruling

We express no opinion concerning any issue not directly addressed in this ruling.

This ruling is directed only to the Taxpayer who requested it. Section 6110(k)(3) of the Code provides it may not be used or cited as precedent. We are sending a copy of this letter ruling to the Industry Director.

Sincerely,

Peter C. Friedman  
Senior Technician Reviewer, Branch 6  
Office of Associate Chief Counsel (Passthroughs  
& Special Industries)