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January 6, 2012

Letter Ruling No. 2012-01

[redacted text]

[redacted text]

RE: RENEWABLE ENERGY TECHNOLOGIES INCOME TAX CREDIT; ANALYSIS OF A SYSTEM AND PROPERTY SERVED

Dear [redacted text]:

This responds to your letter dated September 13, 2011 (the "Ruling Request"), wherein [redacted text] (the "Taxpayer") and [redacted text] (the "Parent") requested confirmation regarding application of the Renewable Energy Technologies Income Tax Credit ("RETITC") under Section 235-12.5, Hawaii Revised Statutes ("HRS"), as further discussed below.

QUESTIONS PRESENTED

There are two questions presented in your Ruling Request, which are as follows:

(1) Whether each assembly of photovoltaic equipment ("PV System") installed and placed in service by the Taxpayer constitutes a separate "solar energy system" within the meaning of HRS § 235-12.5; and

(2) Whether each PV System services commercial property for purposes of the RETITC.

SHORT ANSWERS

Based on the facts set forth in this letter:

(1) Each PV System qualifies as a "solar energy system" under HRS § 235-12.5, and therefore Taxpayer may claim a separate RETITC for each PV System installed and placed in service; and

(2) Because each PV System services commercial property, the applicable cap amount for each RETITC claimed is $500,000.

FACTS REPRESENTED BY THE TAXPAYER

Parent is the parent of an affiliated group of C corporations that files consolidated returns for Hawaii income tax purposes. [redacted text] ("Taxpayer") and [redacted text] ("Affiliate") are wholly-owned affiliates of Parent that join in the filing of those consolidated returns.

Taxpayer has entered into a Power Purchase Agreement dated [redacted text] ("PPA") with [redacted text] (the "Utility"). Pursuant to the PPA, Taxpayer (or a limited liability company that is disregarded as separate from Taxpayer for income tax purposes) will install and place in service [redacted text] (the "Project") [redacted text]. Affiliate will operate the Project, and the Utility will purchase all of the electric power produced by the Project.

Pursuant to the terms of the PPA, Taxpayer and the Utility have agreed that the Project will consist of [redacted text] (each, a "PV System" and together, the "PV Systems") that will convert solar energy to electricity.[1] Each PV System will consist of the following principal components:

1. Multiple independent interconnected strings of photovoltaic panels, which convert solar energy into direct current ("DC") electrical energy;

2. A central inverter rated at [redacted text] ("Inverter"), which converts the DC electrical energy produced by the photovoltaic panels into alternating current ("AC") (there are no micro-inverters, as described in TIR 2010-02, being utilized in the Project);

3. A step-up transformer, which increases the output voltage from the PV System's Inverter from [redacted text] to [redacted text]; and

4. Associated cabling, switchgear, mounting, and monitoring equipment.

The balance of the Project ("BOP") includes the various components not specifically described above but necessary for the photovoltaic project. The main components of the BOP

[1] Taxpayer and Affiliate are under negotiations with various manufacturers for the kilowatt performance capacity of PV Systems that would meet the performance specifications of the PPA, and optimize the business requirements of the manufacturer. The performance capacity ultimately agreed upon may be in the range from [redacted text] to [redacted text] per PV System. In order to provide flexibility for Taxpayer, Affiliate and the Utility to fulfill the performance specifications of the PPA, this ruling shall apply to the kilowatt performance capacity finally agreed upon between the manufacturer, Taxpayer, Affiliate and the local utility, so long as that kilowatt performance capacity is between [redacted text] and [redacted text] and is pursuant to the requirements of the PPA. Therefore, references in this ruling to performance capacity shall include the range of performance capacity ultimately agreed upon by the parties, *i.e.*, between [redacted text] and [redacted text].

include the following: (i) medium voltage switchgear; (ii) low voltage electrical grid for powering auxiliary services; (iii) cabling; and (iv) energy metering equipment. The cost of each PV System includes an allocable portion of the cost of the BOP.

Each of the [redacted text] PV Systems will be separately and independently connected to the Project's electrical sub-grid and will be capable of producing usable electrical energy if any of the other PV Systems fails or is disconnected from the sub-grid for maintenance or other reasons.

The PPA expressly provides that the [redacted text] Project will consist of [redacted text] PV Systems each having a rated output of [redacted text]. The inverter size and multiple-system configuration have been determined for the following non-tax reasons:

1. Grid Stability. By limiting the output of the PV Systems to no more than [redacted text], the failure of an individual inverter or transformer will result in lower grid instability than would occur if larger units were used.

2. Output Maximization. Limiting the output of the PV Systems to no more than [redacted text] provides the flexibility to take one or more of the PV Systems offline for purposes of maintenance or repair while maximizing the electrical power available from the other PV Systems.

3. Redundancy. The failure of a single PV System's transformer or inverter will only reduce the Project's output by no more than [redacted text]%. If larger inverters or transformers were used, a failure of one of those components would have a greater impact on the Project's performance, resulting in a larger decrease in the Project's output.

4. System Optimization. Detection of under-performance at the DC side of the PV Systems (upstream from the corresponding inverters) becomes simpler to locate and correct as the size of inverters decreases, since all else equal, a Project with a larger number of small inverters will have more PV Systems with fewer PV panels in each system, than an equivalently sized Project with a smaller number of large inverters, and since the monitoring system will be connected to monitor respective independent Systems and their inverters. Also, separate and independent PV Systems can be connected to the grid and fully operative even before installation of other remaining PV Systems is completed, thus maximizing the energy yield to the grid during the construction period.

5. Site Flexibility. The topographic characteristics and proximate uses of the site may make it necessary to temporarily remove or relocate individual PV Systems to other areas of the site to support expansion of adjacent uses. For instance, [redacted text], and it may be necessary in the future to relocate one or more PV System to other areas on the [redacted text] Project site to accommodate

expansion. Keeping the individual PV System sizes small relative to the overall Project size will allow for maximum site flexibility.

6. Start-Up Efficiency. Separate and independent PV Systems can be connected to the grid and fully operative even before installation of other remaining PV Systems is completed, thus maximizing the energy yield to the grid during the construction period.

Electrical power from the PV Systems will not service any particular property, but will be entirely directed into the Utility's power grid, through the Project's sub-grid. The amount of electrical power sold to the Utility will be measured by a meter located between the Project's electrical sub-grid and Project's connection to the Utility's power grid.

Taxpayer will claim the RETITCs relating to the PV Systems on its portion of Parent's consolidated Hawaii income tax return. Taxpayer has represented that the business purpose for the transaction is to earn a profit by selling electricity to Utility pursuant to the PPA.

The Utility is not party to the credit claim that is the basis of this Ruling Request.

LAW AND ANALYSIS

A. Because each PV System Constitutes a Separate Solar Energy System, Taxpayer is Eligible to Claim a Separate RETITC for each PV System

A RETITC may be claimed for every eligible "renewable energy technology system" that is installed and placed into service in the State by a taxpayer during the taxable year. HRS § 235-12.5(a). "Renewable energy technology system" includes a "solar energy system," which is defined as "any identifiable facility, equipment, apparatus, or the like that converts solar energy to useful thermal or electrical energy for heating, cooling, or reducing the use of other types of energy that are dependent upon fossil fuel for their generation." HRS § 235-12.5(c).

A single renewable energy technology system exists when all the components necessary for the conversion of insolation into useful electrical energy are present. TIR 2007-02 at p. 4. For purposes of HRS § 235-12.5, a "system" consists of a photovoltaic panel/array, an inverter, and associated attachment and connection equipment sufficient to make a connection to the project site's electrical system. See TIR 2007-02.

In TIR 2010-02, the Department recognized that more than one system may exist at a property site where there is a legitimate, nontax reason for a particular multi-system design. Multiple system designs include separate and independent electrical connections at the project site by means of independent circuit breakers. TIRs 2010-02 and 2010-03 provide examples of non-tax design motivations, including utility interconnection requirements and maximizing production of renewable energy. See TIR 2010-02 p. 5; TIR 2010-03 p. 4.

Each PV System is design-limited to a rated output of no more than [redacted text] for technical engineering reasons. By limiting the output of the PV Systems to [redacted text], the failure of an inverter or transformer will result in lower grid instability than would occur if larger units were used. Furthermore, by limiting the output of the PV Systems to [redacted text], Taxpayer and Affiliate also retain the flexibility to take one or more of the PV Systems offline for purposes of maintenance or repair while maximizing the electrical power available to the Utility from the other PV Systems. The failure of a single PV System's transformer or inverter will only reduce the Project's output by no more than [redacted text]%. If larger inverters or transformers were used, a failure of one of those components would have a greater impact on the Project's performance, resulting in a larger decrease in the Project's output. Furthermore, detection of under-performance at the DC side of the PV Systems (upstream from the corresponding inverters) is simpler to locate and correct than with larger inverters, since the monitoring system will be connected to respective independent inverters. In addition, separate and independent PV Systems can be connected to the grid and fully operative even before installation of other remaining PV Systems is completed, thus maximizing the energy yield to the grid during the construction period.

In accordance with TIR 2010-02, Taxpayer has provided a statement by a licensed electrical engineer, signed under penalties of perjury, in support of the foregoing. The engineer's statement is incorporated by this reference and attached as Exhibit A. Pursuant to TIR 2010-02, based upon the findings of the electrical engineer discussed above, there are legitimate nontax reasons for the separate connection of each PV System to the Project's sub-grid.

As stated above, each of the PV Systems will consist of a separate array of photovoltaic panels, inverter, step-up transformer and associated equipment. The cost of each PV System includes an allocable portion of the cost of the BOP. Each PV System will be connected to the Project's sub-grid and will be capable of operating and providing electrical power separately and independently of any other PV System(s) connected to the Project's electrical sub-grid. Because each of the PV Systems is separate and independent of the others and is separately connected to the Project's sub-grid, each PV System comprises a separate "solar energy system" for purposes of the RETITC. Therefore, Taxpayer is eligible to claim a separate RETITC for each PV System installed and placed in service.

B. Because each PV System Services Commercial Property, the Applicable Cap Amount for each RETITC Claimed by the Taxpayer is $500,000.

The amount of RETITC allowable for each PV System is subject to a cap, and the applicable cap amount depends on the type of property serviced by each System. HRS § 235-12.5(b). The cap for solar energy systems that service commercial property is $500,000 per system. HRS § 235-12.5(b)(2)(C). If a taxpayer installs and places into service a renewable energy technology system that does not service any particular property, but is entirely directed into the energy grid of the local electricity provider, then the system is servicing commercial property only. See TIR 2007-02 at p. 11, Ex. 20.

Here, because the electrical energy from each PV System feeds into the Project's sub-grid which is connected to the Utility's power grid and does not provide electrical power to any other property, each of the PV Systems is a commercial system entitled to the $500,000 per system cap under HRS § 235-12.5(b)(2)(C). Note, however, that if Taxpayer elects under HRS § 235-12.5(g) to make a RETITC refundable, the eligible credit amount for such RETITC will be reduced by thirty percent.

CONCLUSIONS

Based upon the foregoing discussion:

1. Because each PV System qualifies as a "solar energy system" under HRS § 235-12.5, Taxpayer is eligible to claim a separate RETITC for each PV System installed and placed in service by Taxpayer; and

2. Because each PV System services commercial property, the RETITC claimed by Taxpayer with respect to each PV System is subject to a cap of $500,000.

This ruling is applicable only to Taxpayer and shall not be applied retroactively. It may not be used or cited as precedent by any other taxpayer.

The conclusions reached in this letter are based on our understanding of the facts that you have represented. If it is later determined that our understanding of these facts is not correct, the facts are incomplete, or the facts later change in any material respect, the conclusions in this letter will be modified accordingly.

Taxpayer and Parent have reviewed and agreed that a redacted version of this ruling will be available for public inspection.

If you have any further questions regarding this matter, please call me (808) 587-5334. Additional information on Hawaii's taxes is available at the Department's website at www.state.hi.us/tax.

Sincerely,

JACOB L. HERLITZ
Administrative Rules Specialist

[redacted text]