

NEIL ABERCROMBIE  
GOVERNOR

BRIAN SCHATZ  
LT. GOVERNOR



STATE OF HAWAII  
**DEPARTMENT OF TAXATION**  
P.O. BOX 259  
HONOLULU, HAWAII 96809  
PHONE NO: (808) 587-5334  
FAX NO: (808) 587-1584

FREDERICK D. PABLO  
DIRECTOR OF TAXATION

RANDOLF L. M. BALDEMOR  
DEPUTY DIRECTOR

February 2, 2012

**LETTER RULING NO. 2012-05**

[redacted text]

**RE: Renewable Energy Technology Income Tax Credit; Analysis of  
Systems and Property Served**

Dear [redacted text]:

This responds to your letter dated October 6, 2011 (the "Ruling Request"), wherein [redacted text] (Taxpayer A), [redacted text] (Taxpayer B) and [redacted text] (Taxpayer C) (collectively, the "Taxpayers") requested from the Department of Taxation (the "Department") rulings in connection with their solar-photovoltaic energy facilities (the "Facilities" or singularly, "Facility") in Hawaii.

**FACTS REPRESENTED BY THE TAXPAYERS**

The Taxpayers are renewable energy companies.<sup>1</sup> The Taxpayers plan on developing, constructing and installing Facilities at the site known as [redacted text] (the "Park"). The Park will generate [redacted text] megawatts ("MWs") of electrical power, but due to Public Utilities Commission ("PUC") requirements, any renewable energy participant in the Park is permitted to develop only up to [redacted text] MWs of electrical power, with each participant to negotiate and enter into separate power purchase agreements ("PPAs") with Hawaiian Electric Company ("HECO"). As a result, four participants are each installing [redacted text] MW Facilities at the Park. The Taxpayers requesting the rulings in this letter are three of those four participants. The Taxpayers' Facilities will be similar in design and capacity.

Each of the Taxpayers will construct, install and own its respective [redacted text] MW Facility, each of which will deliver [redacted text] MWs of electrical power to HECO's Oahu electrical grid. The Taxpayers will agree to engineer, design, install, operate and maintain the Facilities under the PPAs. The Taxpayers will provide electricity produced by a solar photovoltaic energy system facility to HECO, and HECO will agree to pay for the electrical power generated by the Facilities under the PPAs, which are currently under negotiation. A draft of the technical requirements for the design of the Facilities is formalized in Attachment B of the PPA, which has been provided for the Department's reference. Pursuant to the terms of the PPA,

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<sup>1</sup> [redacted text]

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the Taxpayers and HECO will agree that [redacted text]-kilowatt (KW) central inverters will be utilized for the Taxpayers' Facilities, which will result in [redacted text] independent electrical connections by means of independent circuit breakers for each Taxpayer's Facility. Each of the [redacted text]-KW central inverters is utilized in association with photovoltaic panels and the associated installation and attachment equipment (collectively, "Inverter Assemblies," or singularly "Inverter Assembly"), such that each of the [redacted text] Inverter Assemblies functions independently of the others to create electricity for distribution into the utility grid.

The [redacted text]-KW inverter size and multi-system configuration was determined for numerous non-tax reasons, as confirmed in the electrical engineers' certifications for Taxpayer A, Taxpayer B and Taxpayer C, attached as Exhibits A, B and C, respectively, and incorporated herein by reference:

First, based upon the Taxpayers' experience with the PUC and anticipated final form of the PPAs, the Taxpayers' [redacted text]-KW inverter configuration stands a much better chance of approval by the PUC without additional delay.

Second, the [redacted text]-KW inverter size and multi-system configuration meets certain performance parameters that will be contained in the PPA relating to power production performance requirements and variance tolerances.

Third, during scheduled inverter maintenance and other operations and maintenance-related activity (over the [redacted text] contract obligation), the system design will ensure maximum energy production. Maximizing energy production in this manner will provide a higher level of confidence that revenue projections will be attained. For example, a system design based on a [redacted text]-KW inverter will have minimal impact on grid stability and energy production, and therefore provide more revenue, versus systems designed with larger-sized inverters.

Fourth, besides maintenance efficiencies, the more critical and dynamic scenario where the [redacted text]-KW configuration is preferred is in the event of a tripping disturbance of one Inverter Assembly. In that event, grid disturbance will be minimized with the [redacted text]-KW inverter as opposed to an Inverter Assembly designed with a larger inverter.

In summary, the Facilities' design and configuration with [redacted text]-KW inverters will maximize the likelihood of speedy approval by the PUC, minimize the likelihood of grid disturbance and disruption to the local utility, and will provide the Park the ability to deliver electricity in a stable manner.

## **LAW AND ANALYSIS**

- A. The Companies are Subject to the Credit Cap for Each Separate and Independent System, Which in this Case is Equal to the Number of Inverter Assemblies**

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The RETITC may be claimed for each eligible renewable energy technology system that is installed and placed in service in Hawaii by a taxpayer during the taxable year. HRS § 235-12.5(a). A single renewable energy system exists when all the components necessary for the conversion of insolation into useful electrical energy are present. TIR 2007-02, page 4. In the photovoltaic context, a single system consists of a photovoltaic array, an inverter, an independent circuit breaker, and associated attachment and connection equipment sufficient to make a connection to the site's electrical system. TIR 2010-02, page 5 and TIR 2007-02, page 4, Ex. 4.

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, among others. See TIR 2010-02 p. 5; TIR 2010-03 p. 4.

Based upon the representations, each of the Taxpayers' [redacted text]-KW Inverter Assemblies is a separate photovoltaic system within the meaning of TIR 2007-02 because each includes the necessary photovoltaic panels or array of panels, inverter, and installation and attachment equipment to function independently for connection into the local utility's grid. Each Inverter Assembly installed and placed in service by the Taxpayers will have a separate and independent [redacted text]-KW Inverter, solar array, and associated connection equipment. As a result, each [redacted text]-KW Inverter Assembly will connect to the local utility grid separately and independently of any other [redacted text]-KW Inverter Assembly installed on the same property. Therefore, because each of the Inverter Assemblies is comprised of the necessary equipment to produce electricity for distribution into the local utility grid, each Inverter Assembly constitutes a system within the meaning of HRS § 235-12.5.<sup>2</sup>

Moreover, Taxpayers have represented that the Facilities' design and multi-system configuration were selected for nontax reasons within the meaning of TIR 2010-02. The [redacted text]-KW inverter size was selected due to utility interconnection requirements pursuant to the terms of the PPA. The [redacted text]-KW inverter size was also selected to ensure the Facilities' efficiencies and to facilitate likely PUC approval. Because the [redacted text]-KW inverter size and the Facilities' overall configuration were selected based upon factors other than tax considerations, the "system" determination will not be considered tax motivated within the meaning of TIR 2010-02.

### **B. The Taxpayers' Systems are Servicing Commercial Property, and the Applicable Cap Amount for Each System 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-

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<sup>2</sup> The Taxpayers in this case are not utilizing micro-inverter technology with the project. Had the Taxpayers utilized micro-inverter technology, as discussed in TIR 2010-02, a different analysis and conclusion would result.

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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. In this case, the Taxpayers will sell under the PPA the electricity generated by all the systems to HECO, a public utility, and therefore a public utility grid. The Taxpayers' energy is not servicing any particular type of property.

Because the Taxpayers' systems are solely servicing commercial property, the applicable credit cap is \$500,000 per system under HRS § 235-12.5(b)(2)(C).

Currently, the cost of each [redacted text]-KW system will be greater than \$[redacted text].<sup>3</sup> At a cost of \$[redacted text], each system would be eligible for a RETITC of 35% of qualified costs, or \$[redacted text] for each system. As this amount is higher than the applicable \$500,000 cap for systems servicing commercial property, the RETITC is limited to \$500,000 per system. If the election under HRS § 235-12.5(g) is made to make the RETITC refundable, then the RETITC is reduced by 30% to \$350,000 per system. Therefore the total RETITC claimable for each Taxpayer's [redacted text] System Assemblies of the Park will be \$[redacted text] nonrefundable, and \$[redacted text] refundable. In total, the total RETITC claimable for the three Taxpayers' [redacted text] System Assemblies of the Park will be \$[redacted text] nonrefundable and \$[redacted text] refundable.

## **CONCLUSIONS**

Based upon the foregoing discussion:

1. Because each System Assembly qualifies as a "solar energy system" under HRS § 235-12.5, Taxpayers are eligible to claim a separate RETITC for each System Assembly installed and placed in service by the Taxpayer; and
2. Because each System Assembly services commercial property, the RETITC claimed by the Taxpayers with respect to each System Assembly is subject to a cap of \$500,000.

The rulings contained in this letter are based upon information and representations submitted by the Taxpayers and accompanied by penalty of perjury statements executed by appropriate parties. While this office has not verified any of the material submitted in support of the request for ruling, it is subject to verification on examination.

Except for the specific ruling above, we express or imply no opinion concerning the tax consequences of the facts of this case under any other provision.

The Taxpayers have reviewed a redacted version of this ruling and agreed that it will be

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<sup>3</sup> [redacted text]

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available for public inspection.

If you have any further questions regarding this matter, please call me at [redacted text]. Additional information on Hawaii's taxes is available at the Department's website at [www.state.hi.us/tax](http://www.state.hi.us/tax).

Sincerely,

JACOB L. HERLITZ  
Administrative Rules Specialist

[redacted text]

[redacted text]