

NEIL ABERCROMBIE
GOVERNOR

BRIAN SCHATZ
LT. GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TAXATION
P.O. BOX 259
HONOLULU, HAWAII 96809
PHONE NO: (808) 587-1530
FAX NO: (808) 587-1584

FREDERICK D. PABLO
INTERIM DIRECTOR OF TAXATION

RANDOLF L. M. BALDEMOR
DEPUTY DIRECTOR

LETTER RULING NO. 2011-01

[REDACTED TEXT]
[REDACTED TEXT]
[REDACTED TEXT]
[REDACTED TEXT]

January 27, 2011

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

Dear [REDACTED TEXT]:

This responds to your [REDACTED TEXT] ruling request, wherein you requested confirmation regarding application of the Renewable Energy Technologies Income Tax Credit, Section 235-12.5, Hawaii Revised Statutes ("HRS") ("RETITC"), as further discussed below.

QUESTIONS PRESENTED

There are two questions presented in your ruling request, which are as follows:

- (1) Whether [REDACTED TEXT] (the "Company") has a legitimate, non-tax reason for installing multiple photovoltaic systems where each such system is determined by Inverter Assembly, as defined below, with separate credit claims under the RETITC (Inverter Assembly also hereinafter referred to as "System(s)"); and
- (2) Whether each System installed and placed in service by the Company is servicing commercial property for purposes of the RETITC.

SHORT ANSWER

Based on the facts set forth in this letter:

- (1) The Company has a legitimate, non-tax reason for installing multiple systems within the meaning of TIR 2010-02 based upon the facts discussed below. The Company is eligible to claim the RETITC for each System that is installed and placed in service; and
- (2) The Company's Systems are each servicing commercial property for purposes of the RETITCs.

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FACTS REPRESENTED BY THE COMPANY

The Company is a [REDACTED TEXT] renewable energy company. The Company plans on developing, constructing, and installing commercial solar photovoltaic energy systems in Hawaii. The Company will subcontract the construction and installation of the solar energy systems to one or more Hawaii subcontractors; however the Company will own the systems. The Company and potential investors intend to benefit from the RETITC.

The Company will enter into a Power Purchase Agreement (“PPA”) with the local utility company for a commercial solar photovoltaic energy project on [REDACTED TEXT] (the “Project”) to deliver [REDACTED TEXT] megawatts of electrical power to the [REDACTED TEXT] electrical grid. The Company has agreed to engineer, design, install, operate, and maintain a solar photovoltaic energy system under the PPA. The Company will provide electricity produced by a solar photovoltaic energy system to the local utility, and the local utility has agreed to pay for the electricity under the PPA. The technical requirements for the system design are formalized in Appendix B of the PPA, which is attached and by this reference incorporated herein as Exhibit A. Pursuant to the terms of the PPA, the Company and the local utility have agreed that [REDACTED TEXT] central inverters will be utilized in the project, which will result in [REDACTED TEXT] independent electrical connections by means of independent circuit breakers.¹ Each of the [REDACTED TEXT] central inverters is utilized in association with photovoltaic panels and the necessary installation and attachment equipment, such that each of the [REDACTED TEXT] central inverter assemblies functions independently of the others to create electricity for distribution into the utility grid (“Inverter Assemblies”).

The [REDACTED TEXT] inverter size and multi-system configuration was determined for numerous nontax reasons:

First, based upon the Company’s experience with the Public Utilities Commission (“PUC”) and its approval of PPAs, the Project’s [REDACTED TEXT] inverter configuration stands a much more likely chance of approval without additional delay.

¹The Company is under negotiations with various manufacturers for the kilowatt performance capacity of each inverter that would meet the performance specifications of Appendix B to 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 inverter. In order to provide flexibility for the Company and the local utility to fulfill the performance specifications of the PPA, this ruling shall apply to the kilowatt performance capacity finally agreed upon between the manufacturer, the Company, 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 Appendix B to the PPA. Therefore, references in this ruling to [REDACTED TEXT] of performance capacity shall include the range of performance capacity ultimately agreed upon by the parties, *i.e.*, between [REDACTED TEXT] and [REDACTED TEXT]. Though the number of total systems may increase due to smaller inverter capacity, the impact on total tax credits available will be less because the smaller inverters are also less expensive. The manufacturer at issue is not related to micro inverters.

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Second, the [REDACTED TEXT] inverter size and multi-system configuration meets certain performance parameters expressly 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]-year contract obligation), the system design will ensure maximum energy production, which will satisfy the required projected energy production guarantees in the PPA. Maximizing energy production in this manner will provide a higher level of confidence that revenue projections will be attained. For example, when any of the Systems are required to be offline for maintenance, a system design based on a [REDACTED TEXT] inverter will have minimal impact on grid stability and energy production, and therefore provide more revenue, versus systems designed with larger sized inverters (*e.g.*, [REDACTED TEXT] inverters).

Fourth, besides maintenance efficiencies, the more critical and dynamic scenario where the [REDACTED TEXT] configuration is preferred is in the event of a tripping disturbance of one system. In that event, grid disturbance will be minimized with the [REDACTED TEXT] inverter as opposed to a system designed with a larger inverter.

In summary, the Project design and configuration with [REDACTED TEXT] 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 Project the ability to deliver electricity in a stable manner.

LAW AND ANALYSIS

The RETITC may be claimed for each eligible renewable energy technology system that is installed and placed in service in the State by a taxpayer during the taxable year. HRS § 235-12.5(a).

A. The Company is Subject to the Credit Cap for Each Separate and Independent System, which in this Case is Equal to the Number of Inverter Assemblies.

The RETITC may be claimed for each eligible renewable energy technology system that is installed and placed into service. HRS § 235-12.5(b). 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, pg 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 project site's electrical system. *See* TIR 2010-02, pg 5 and TIR 2007-02, pg 4, Ex. 4.

The Department issued TIR 2010-02 providing guidance on the determination of a "system" for purposes of the RETITC. TIR 2010-02 concludes that the determination of a "system" within the

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meaning of the RETITC is not necessarily determined by the number of inverters; but rather the number of separate and independent connections to the site's electrical system. With regards to inverters specifically, the Department stated:

For purposes of determining the number of systems associated with any property, the proper test under TIR 2007-02 is the number of independent connections to the project site's electrical system. The number of independent electrical connections may be equal to the number of inverters, or it may not. Ordinarily, on a system involving central or string inverters, the number of if inverters involved will be equal to the number of systems because each central inverter will have its own independent function as it relates to the connection into the electrical system.

TIR 2010-02, pg 3 (emphasis added).

More than one system may exist at a property site where there is a legitimate, nontax reason for a particular multi-system design. TIR 2010-2, pg 5. TIR 2010-02 and TIR 2010-03 provide examples of non-tax design motivations, including utility interconnection requirements and inverter efficiency, among others. *See* TIR 2010-02, pg 5; TIR 2010-03, pg 4.

Each of the Company's Inverter Assemblies will constitute a separate photovoltaic system within the meaning of TIR 2007-02 because each such Inverter Assembly 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. The Company represents that each Inverter Assembly will connect to the local utility grid separately and independently of any other 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 § 235-12.5.²

Moreover, the Project's design and multi-system configuration was for nontax reasons within the meaning of TIR 2010-02. The [REDACTED TEXT] inverter size was selected due to utility interconnection requirements pursuant to the terms of the PPA. The [REDACTED TEXT] inverter size was also selected to ensure Project efficiencies and to facilitate likely PUC approval. Because the [REDACTED TEXT] inverter size and the Project's overall configuration was 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 Company's Systems are Commercial Systems Entitled to the Commercial Credit

² The Company in this case is not utilizing micro-inverter technology with the Project. Had the Company utilized micro-inverter technology, as discussed in TIR 2010-02, a different analysis and conclusion would result.

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Cap.

The amount of the RETITC allowable for each system is subject to a cap, the applicable cap amount of which depends upon the type of property being serviced by each system. HRS § 235-12.5(b). Systems installed for commercial property, for example, enjoy the highest cap for solar powered systems, which is \$500,000 per system. HRS § 235-12.5(b)(2)(C). If a taxpayer installs and places in 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 a commercial property only. *See* TIR 2007-02, pg 11, Example 20. In this case, the Company will sell the electricity generated by all the Systems to the local utility under a PPA, and therefore a public utility grid. The Company's energy is not servicing any particular type of property.

Because the Systems are solely servicing the local electricity provider, the Company's Systems are commercial systems entitled to the \$500,000 credit cap per system under HRS § 235-12.5(b)(2)(C), as allowed under TIR 2007-02. Specific to the Company's proposed project, the cost of each [REDACTED TEXT] system will be approximately [REDACTED TEXT], which will generate a RETITC equal to 35% of qualified costs, or [REDACTED TEXT] for each system (this amount being lower than the \$500,000 applicable cap for commercial systems). If the election under HRS § 235-12.5(g) is made to make the RETITC claim refundable, then the RETITC is reduced by 30% to [REDACTED TEXT] per system ([REDACTED TEXT]x .70). Therefore, the total RETITC claimable for the [REDACTED TEXT] systems of the project will be [REDACTED TEXT] if nonrefundable, or [REDACTED TEXT] if refundable.

CONCLUSION

The Company will install and place in service multiple Systems that can be separately and independently connected to the local utility grid for legitimate non-tax reasons. The Company's Systems are determined by legitimate non-tax reasons within the meaning of TIR 2010-02 because the System size was determined by interconnection and regulatory reasons. The Company may claim the RETITC for each System it installs and places into service during the taxable year, regardless of whether multiple Systems are installed on a single property.

Since energy from the Company's Systems is entirely directed into the energy grid of the local electricity provider, each System is servicing commercial property for purposes of the RETITC.

This ruling is applicable only to the Company 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

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facts are incomplete, or the facts later change in any material respect, the conclusions in this letter will be modified accordingly. This ruling also may be subject to change due to future amendments to laws, rules, or official Department positions.

The Company has reviewed and agreed that the redacted version of this ruling attached as Exhibit B will be available for public inspection.

If you have any further questions regarding this matter, please call me (808) 587-1569. Additional information on Hawaii's taxes is available at the Department's website at www.state.hi.us/tax.

Very truly yours,

JOSEPH B. TICHY
Administrative Rules Specialist