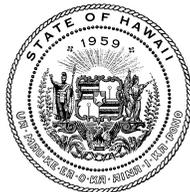


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## **TAX INFORMATION RELEASE NO. 2010-02**

Re: Further guidance regarding the term "system" for purposes of the Renewable Energy Technologies Income Tax Credit, HRS § 235-12.5.

The purpose of this Tax Information Release (TIR) is to provide additional guidance on the Department of Taxation's (Department) interpretation of the term "system" for purposes of the Renewable Energy Technologies Income Tax Credit set forth at Section 235-12.5, Hawaii Revised Statutes (HRS) (hereinafter "credit"). Due to technological advances in photovoltaic renewable energy system technology, it is necessary for the Department to restate its position and provide additional interpretation.

### **TIR 2007-02 AND DETERMING THE NUMBER OF SYSTEMS**

In TIR 2007-02, the Department analyzed how to determine the number of systems for purposes of calculating the credit amount:

The key to answer the question of whether any installation of renewable energy technology constitutes the installation of one or more systems...depends upon identifying the facility, equipment, apparatus or the like that is converting insolation...into 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. A system will only exist when all the components necessary for the conversion of insolation...into useful thermal or electrical energy are present.

Discerning a "system" for purposes of the credit is important because the credit's cap applies per system. Therefore, if a taxpayer installs more than one system on a property, more than one credit cap may be applicable depending upon the facts and circumstances of a particular case.

TIR 2007-02 went on to provide two examples of photovoltaic systems, distinguishing whether more than one system was installed for purposes of the credit:

**Example 4:**

Taxpayer installs and places into service three photovoltaic panels/arrays, one inverter, and associated attachment and connection equipment sufficient to make one connection to the project site's electrical system. The taxpayer has installed one system, not three.

**Example 5:**

Taxpayer installs and places into service three photovoltaic panels/arrays, three inverters, and associated attachment and connection equipment sufficient to make three separate, independent connections to the project site's electrical system. If the taxpayer installs each array to a separate inverter, which is connected to the project site's electrical system separately and independently of the other inverter-array combinations, the taxpayer has installed three systems.

(emphasis added).

**THE INVERTER ALONE DOES NOT DICTATE THE NUMBER OF SYSTEMS**

The Department has learned that the photovoltaic industry, taxpayers, and tax practitioners have interpreted the foregoing discussion contained in TIR 2007-02 to mean that a "system," for purposes of determining the credit cap, is based upon the number of inverters installed on a project.

The number of inverters alone does not dictate the number of systems eligible for independent credit caps. TIR 2007-02 defines a system based upon the number of independent functioning connections to the electrical system—not the number of inverters.

The Department is clarifying TIR 2007-02 to curb perceived abuse in the credit's application per system as the credit applies to photovoltaic technology systems that use micro-inverters. The Department understands that the use of micro-inverters in single-family residential home applications has become more common. Because of the volume of single-family residential tax credit claims, it is important that the Department advise industry participants, taxpayers, and tax practitioners to avoid unnecessary controversy or dispute.

***A. Micro-inverters vs. Central or String Inverters—Distinction***

A micro-inverter is a device that converts the direct current (DC) produced from a single solar panel module to alternating current (AC). A central or string inverter, on the other hand, aggregates all DC current from an entire photovoltaic system and converts that DC power from the entire array into AC power. The main distinction between the micro-inverter and the central or string inverter is that there is typically a single micro-inverter for each solar panel in a system utilizing micro-inverters, thus eliminating the need for a central inverter. A system utilizing the central or string inverter contains one inverter per solar panel array,<sup>1</sup> converting the entire array's DC power into AC power at one common point. From an electrical engineering standpoint, a central or string inverter system is connected in series. A micro-inverter system is connected in parallel.

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<sup>1</sup> An array is a grouping of solar panels.

***B. Micro-inverters vs. Central or String Inverters—Relevance in Application of the Credit***

As stated above, the Department has learned that many persons involved in photovoltaic systems have attempted to claim the credit based upon the number of inverters. Assuming the number of inverters is the test to determine the number of systems, a photovoltaic system on an ordinary single-family residential house using micro-inverters could potentially have 20 systems, assuming there are 20 panels and 20 micro-inverters. However, the same sized system on the same house using a single central or string inverter would only constitute one system.

If the number of inverters is the proper test for determining a system for purpose of the credit cap, a comparable system of equal size as demonstrated above would result in radically different credit claims—a claim with 20 caps for the system containing micro-inverters and a claim with one cap for the system with a central inverter. Because of the radically differing results, for which there is no basis for differentiation as a matter of tax law, the Department reminds taxpayers, tax practitioners, and industry participants that the number of inverters does not dictate the number of systems.

The Department will be pursuing and challenging any claims made by micro-inverter system owners who have claimed that the credit's cap is based upon the number of micro-inverters.

**THE NUMBER OF CONNECTIONS TO THE ELECTRICAL SYSTEM IS THE PROPER TEST**

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 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. However, on a system utilizing micro-inverters, ordinarily the number of systems will not equal the number of inverters because a micro-inverter system wired in parallel ordinarily only has one independent connection to the project's electrical system.

In order to determine the number of connections to the project site's electrical system, the Department will look to the number of independent connections into a final utility metering device or circuit breaker. It is possible for a single project site to have more than one point of connection into a final utility metering device or circuit breaker.

**Example 1:**

Taxpayer installs and places into service three photovoltaic panels, with a micro-inverter attached to each panel for a total of three inverters, and associated attachment and connection equipment sufficient to make a single connection into the single family home's circuit breaker. The taxpayer has installed one system, not three.

**Example 2:**

Same facts as Example 1, except the system includes one central inverter and no micro-inverters. The taxpayer has installed one system.

**Example 3:**

Taxpayer installs and places into service ten photovoltaic panels, with a micro-inverter attached to each panel for a total of ten inverters, and associated attachment and connection equipment sufficient to make two independent connections into the single family home's two independent circuit breaker panels. One circuit breaker panel is for the home's main electric system. The other panel is located in the garage and is used to control the power for the home's swimming pool and sprinkler system. The taxpayer has installed two systems because there are two independent connections to the project site's electrical system.

**Example 4:**

Same facts as Example 3, except the system includes two central inverters for aggregation of DC power to each separate panel and no micro-inverters. The taxpayer has installed two systems.

**TAX MOTIVATED INSTALLATIONS WILL BE DISREGARDED**

The only connections to a project site's electric connection that will qualify as independent separate systems are those electrical connections that have a legitimate purpose and are not tax motivated.

For example, if a taxpayer foregoes a junction box or other device used to reduce multiple connections into a single connection for purposes of connecting to the circuit breaker so that the taxpayer can create multiple connections to increase the number of credit caps, such installation will be considered tax motivated, a sham, and will be challenged by the Department. Where multiple systems are claimed and are subsequently found to be a sham by the Department, only one system will be allowed.

The Department reserves the right to inspect any installation resulting in more than one system per project site to ensure that the number of systems is legitimate and not abusive.

**Example 5:**

Taxpayer installs and places into service 20 photovoltaic panels, with a micro-inverter attached to each panel for a total of 20 inverters, and associated attachment and connection equipment. Assume further that a similar system ordinarily includes a junction box to reduce the 20 connections from the individual panels into a single connection for easy installation into the circuit breaker. In order to increase the

number of credit caps, the taxpayer requested that the installation include 20 separate connections to the circuit breaker, bypassing the junction box. Assume further that there is no independent nontax reason for 20 separate connections to the circuit breaker. This installation would be considered abusive by the Department and the Department would disallow any claim involving more than one system. One system would be allowed.

The same analysis in Example 5 would apply to multiple use of central or string inverters with multiple connections to the electrical system that lack a legitimate nontax purpose.

Examples of legitimate nontax reasons for multiple connections to an electrical system include:

- Separate independent circuit breakers located at the same project site;
- Separate independent utility metering devices located at the same project site;
- System capacity or load capacity of equipment;
- Utilizing multiple connections to independently power separate devices or for separate uses (*i.e.*, one system to power air conditioning and another system for net metering);
- Any other legitimate nontax reason certified by an electrical engineer in writing and signed under penalties of perjury containing the following affirmation—

“I declare, under the penalties set forth in section 231-36, HRS, that this statement (including any diagrams or supporting documentation) has been examined by me and, to the best of my knowledge and belief, is a true, correct, and complete statement of the facts as they relate to this certification, made in good faith, pursuant to Hawaii Income Tax Law, Chapter 235, HRS.”

Ultimately, whether or not a connection is abusive or outside the Department's interpretation of a separate independent system is made on a case-by-case basis.

### **TEMPORARY AMNESTY/PENALTY WAIVER FOR THOSE CLAIMING ABUSIVE CREDITS**

The Department will be pursuing all taxpayers who have claimed more than one system to determine whether such claims are in accord with this TIR. It is the Department's position that the positions taken in TIR 2007-02 are clear and that the proper test to determine a system is independent connections—not the number of inverters. The Department understands that industry participants who sell or install photovoltaic systems have advised customers and clients to the contrary and that the number of inverters is the proper approach. The Department believes that industry participants who have advocated these positions have potentially participated in the promotion of an abusive tax shelter within the meaning of HRS § 231-36.7. A person who is found to have promoted an abusive tax shelter within the meaning of HRS § 231-36.7 may be subject to a penalty of \$1,000 per shelter or could be prohibited from further promoting the underlying transaction, in this case the promotion of Hawaii tax incentives.

The Department will be vigorously pursuing those who have abused the renewable energy credit, including market participants who have violated Hawaii tax shelter or other laws. In

furtherance of the Department's tax compliance efforts, the Department will be approaching industry participants to obtain customer lists and other information about those who have had multiple systems installed on their premises.

Notwithstanding the foregoing, the Department strongly encourages voluntary compliance with the tax laws. Beginning immediately, taxpayers will be allowed to submit amended returns adjusting credit claims to conform to the positions in this TIR and TIR 2007-02. If a taxpayer submits amended tax returns by June 30, 2010 correcting any erroneous refund claims, all penalties associated with abusive claims will be waived. Amended tax returns reflecting adjustments to renewable energy credits should include the marking "ENERGY CREDIT AMNESTY" on the top of the return. The Department reminds taxpayers that penalties are assessable for substantial understatements, erroneous refund claims, as well as negligence in tax positions that are contrary to express guidance. The Department will be assessing the 20% erroneous refund claim on all abusive claims starting July 1, 2010.

Moreover, the Department will waive the tax shelter promoter penalty for those industry participants that fully cooperate with the Department's investigation into customer lists and other information regarding the renewable energy system plans offered for sale.

### **IMPACT ON ADDITIONS TO EXISTING SYSTEMS**

This TIR is not intended to impact the Department's interpretation or analysis of allowing a separate credit claim for additions to an existing system, as discussed in TIR 2007-02. In order for additions to existing systems to qualify for the credit, the installation and placing in service of equipment must be substantial and not constitute mere maintenance or repair of the existing system.

### **EFFECTIVE DATE**

This TIR is effective immediately and applies to any system placed in service prior to its effective date where the statute of limitations for assessment or refund remains open.

For additional information regarding this TIR, please call (808) 587-1577.



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