



## STATE BOARD OF EQUALIZATION

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January 13, 2014

**Re: *New Construction Exclusion for Integrated Solar Energy Systems***  
***Assignment No.: 13-247***

Dear Mr.       :

This is in response to your request for a legal opinion regarding whether residentially hosted rooftop distributed photovoltaic electric generation systems (Systems) are classified as personal property or real property, and whether they qualify for an exclusion as new construction under Revenue and Taxation Code<sup>1</sup> section 73. As explained below, it is our opinion that the Systems are classified as real property that qualify for the new construction exclusion under section 73.

### **Factual Background**

According to your letter, the G        S       , Inc. (GS) owns or controls a certain Delaware limited liability company (Company), through which GS intends to invest in the development of Systems. Pursuant to a master lease agreement (MLA) or master purchase agreement (MPA), the Company will purchase the Systems and related contractual rights (each a Project) from a project owner and/or developer (Developer). At the time of the Company's lease or purchase of the Projects, the Developer will have entered into equipment leases or power purchase agreements (Customer Agreements) with the residential customer hosting the System (each a Customer) for an initial terms of 20 years, which is about 60 percent of the System's useful life.

The Projects will consist of the Systems, which are comprised of photovoltaic panels, mounting racks, wiring and other electrical devices, conduit, weatherproof housing, hardware, one or more power inverters, remote monitoring systems, connectors, meters, disconnects, breakers, and over-current devices. The installation of a System involves the delivery of the required components, which typically include solar panels weighing between 25 to 40 pounds. An average System may be comprised of 12 to 20 panels depending on customer needs and the conditions at each location. Installers are engaged to assess conditions and install an appropriate mounting system.

<sup>1</sup> All further statutory references are to the Revenue and Taxation Code unless otherwise specified.

To install an indented mount integrated with flashing, installers mark and pre-drill holes into the roof, typically using a 7/32" drill bit, and secure the indent mounts with steel lag bolts. The flashing is positioned under the shingles and mount, then secured with steel lag bolts driven into the rafters. In most instances, the mounts can be removed with only minor damage to the roof from the roof penetrations for the lag bolts used to secure the indent mounts.

A racking system, comprised of aluminum bars or rails attached to roof anchors with bolts, washers, and nuts, is generally attached to the indent mounts by affixing the roof anchors to the lag bolts. Both the racking system and roof anchors can be readily removed by loosening the nuts and washers without damage to the indent mounts or roof, and are generally suitable for reinstallation and reuse.

Metal clips are attached to the rails of the racking system with stainless steel bolts, washers, and nuts, and serve as brackets to hold photovoltaic modules in place. Both the clips and the photovoltaic modules can be readily removed by loosening the nuts and washers without damage to the clips, the photovoltaic modules, the racking system, the indent mounts, or the roof, and are generally suitable for reinstallation and reuse.

The installation of photovoltaic modules involves electrical work to connect the photovoltaic modules to the electrical grid to enable the homeowner to use the power produced by the System. The System will generally be connected to the electric grid with a grid-tied inverter, which is typically attached to the side of the residence. Wiring connects the photovoltaic panels to the grid-tied inverter, and the grid-tied inverter to the electric utility meter. Once tested, the System produces power by generating direct current electricity transmitted through a wire connecting it to the grid-tied inverter, which converts the direct current electricity into usable alternating current electricity for use and consumption in the residence. The useful life of each System is estimated at 35 years, and the grid-tied inverter has an expected life of 10 years.

Under the terms and conditions of the MLA and MPA, the Company and the Developer generally agree that the Systems will constitute personal property (and not realty or a fixture attached to realty) under state and local law other than for ad valorem and other property tax purposes. The Company and the Developer will also agree that the Systems are not real property fixtures for purposes of the Uniform Commercial Code.

Each Customer Agreement expressly provides that the Systems constitute removable tangible personal property consisting of equipment that will not be a fixture or otherwise part of the real property to which it is affixed, other than for ad valorem and other property tax purposes. The Customer Agreements also make clear that the customers have no ownership interest in the Systems and the customers may not subject the Systems to liens or encumbrances.

### **Law and Analysis**

California Constitution article XIII A, section 2, subdivision (a) provides in relevant part that full cash value of real property means the appraised value of real property as shown on the 1975-76 tax bill or "the appraised value of real property when purchased, newly constructed or a change in ownership has occurred after the 1975 assessment." Section 70, subdivision (a) defines "new construction", in part, as "[a]ny addition to real property, whether land or improvements (including fixtures), since the last lien date..."

Property Tax Rule<sup>2</sup> (Rule) 122.5, subd. (a)(1) defines the term "fixture" as:

. . . an item of tangible property, the nature of which was originally personalty, but which is classified as realty for property tax purposes because it is physically annexed or constructively annexed to realty with the intent that it remain annexed indefinitely.

Rule 122.5 further provides several tests for determining whether a piece of personal property becomes a fixture upon its attachment to land or to an improvement. The physical annexation test provides:

Property is physically annexed if it is attached to, imbedded in, or permanently resting upon land or improvements in accordance with section 660 of the Civil Code, or by other means that are normally used for permanent installation. If the property being classified cannot be removed without substantially damaging it or the real property with which it is being used, it is to be considered physically annexed. If the property can be removed without material damage but is actually attached, it is to be classified as a fixture unless there is an intent, as manifested by outward appearance or historic usage, that the item is to be moved and used at other locations.

(Rule 122.5, subd. (b)(1).)

The intent test states:

Intent is the primary test of classification. Intent is measured with—not separately from—the method of attachment or annexation. If the appearance of the item indicates that it is intended to remain annexed indefinitely, the item is a fixture for property tax purposes. Intent must be inferred from what is reasonably manifested by outward appearance. An oral or written agreement between parties, such as a contract between lessor and lessee, is not binding for purposes of determining intent.

(Rule 122.5, subd. (d)(1).)

While fixtures are considered real property subject to reassessment as "new construction" under section 70, for purposes of property tax, the definition of "new construction" does not include the construction of an "active solar energy system." (Cal. Const., art. XIII A, subd. (c)(1); Rev. & Tax. Code, §73, subd. (a).) "Active solar energy system" means:

a system that, upon completion of the construction of a system as part of a new property or the addition of a system to an existing property, uses solar devices, which are thermally isolated from living space or any other area where the energy is used, to provide for the collection, storage, or distribution of solar energy.

(Rev. & Tax. Code, § 73, subd. (b)(1).)

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<sup>2</sup> All Property Tax Rule or Rule references are to title 18 of the California Code of Regulations.

If the active solar energy system is used in the production of electricity, then the system's storage devices, power conditioning equipment, transfer equipment, and parts related to the functioning of those items are also excluded from taxation. (Rev. & Tax. Code, § 73, subd. (d)(1)(B).) The term "parts" includes spare parts that are owned by the owner of, or the maintenance contractor for, an active solar energy system, if the spare parts were specifically purchased, designed, or fabricated by or for that owner or maintenance contractor for installation in an active solar energy system. (*Ibid.*)

*1. Are the Systems properly characterized as real or personal property for California ad valorem property tax purposes?*

As explained above, the Systems will be considered fixtures, and thus real property, if they are physically annexed to the Customers' real properties and if they are intended to remain physically annexed indefinitely. As you state in your letter, the Systems can be removed without substantial damage to the Customer's roof and therefore the Systems will only meet the physical annexation test if they are actually attached to the customer's roof and there is no intent, as manifested by outward appearance or historic usage, that the item is to be moved and used at other locations. (Rule 122.5, subd. (b)(1); Property Tax Annotation<sup>3</sup> 610.0088 (September 17, 2008); See also *Guidelines for Active Solar Energy Systems New Construction Exclusion* (Nov. 2012), p. 2.) The method of annexation is relevant to determine intent. (Rule 122.5, subd. (d)(1).) The Systems are typically comprised of between 12 and 20 solar panels weighing between 25 and 40 pounds each, which are attached to a Customer's residential real property by indent mounts secured to the roof by steel lag bolts. The Systems are specifically designed to meet each individual Customer's residential electricity needs and are sized and adapted according to the available space, as well as the angle, pitch, and direction of the Customer's roof. While the panels can be removed without substantial damage, the holes resulting from penetration of steel lag bolts would require repair with a sealant compound or some other means to restore the watertight integrity of the roof. Further, your letter indicates that historic usage of similar Projects implies that the expectation under the Customer Agreements is that there will be no removal of the Systems during the 20-year term. Thus, in our view, the Systems should be classified as fixtures under the physical annexation test.

With regard to the intent test, although the parties agree under the terms and conditions of the MLA, MPA and the Customer Agreements that the Systems will constitute personal property under state and local law other than for ad valorem property tax purposes, Rule 122.5, subdivision (d)(1) expressly states that a written contract "is not binding for purposes of determining intent." As noted above, the outward appearance of the Systems, which are panels of substantial size and weight, designed to accommodate a specific Customer's needs and to physically fit that Customer's residential rooftop, and which are actually attached to a Customer's roof by steel lag bolts, indicates that the parties to these transactions intend to annex the Systems to the real property indefinitely. Under the intent test, it is our opinion that the Systems should be classified as real property.

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<sup>3</sup> Property tax annotations are summaries of the conclusions reached in selected legal rulings of State Board of Equalization counsel published in the State Board of Equalization's Property Tax Law Guide. (See Cal. Code Regs., tit. 18, § 5700 for more information regarding annotations.)

2. *If the Systems are properly classified as real property, do the Systems qualify for the exclusion from assessment as new construction under California Revenue and Taxation Code section 73?*

As stated above, it is our opinion that the Systems are classified as real property for property tax purposes. While the Systems appear to qualify as "new construction" under section 70 in that they are considered something of value physically added to real property, section 2 subdivision (c) of Article XIII A the California Constitution and section 73 specify that the terms "new construction" or "newly constructed" shall not include the construction of "any active solar energy system." As such, if the Systems qualify as active solar energy systems, they would be excluded from property tax reassessment pursuant to Section 73 until there is a subsequent change in ownership. (See Rev. & Tax. Code, § 73, subd. (f).)

As your letter indicates, the Systems are residentially hosted rooftop distributed photovoltaic electric generation systems. The Systems use solar devices, in the form of photovoltaic modules, typically comprised of solar panels made up of numerous individual solar cells. The photovoltaic modules are mounted on the rooftops of the residential property of each Customer, and thus thermally isolated from the living space where the energy is used. Your letter indicates that the Systems generate, transmit, and convert direct current electricity into usable alternating current electricity for use and consumption in the residence. As such, it is our opinion that the Systems, including parts related to its production of electricity, its storage devices, power conditioning equipment, transfer equipment, and parts related to the functioning of those items, would qualify as "active solar energy systems" and would thus be excluded from assessment as new construction.

The views expressed in this letter are only advisory in nature; they represent the analysis of the legal staff of the Board based on present law and the facts set forth herein, and are not binding on any person or public entity.

Sincerely,

/s/ Leslie Ang

Leslie Ang  
Tax Counsel

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cc: Honorable Larry W. Ward  
President of California Assessors' Association  
Riverside County Assessor

Mr. David Gau           MIC:63  
Mr. Dean Kinnee        MIC:64  
Mr. Todd Gilman        MIC:70