



## STATE BOARD OF EQUALIZATION

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May 6, 2015

Ms. \_\_\_\_\_, Chief Appraiser  
 Personal Property Division  
 County Assessor's Office

**Re: Active Solar Energy Exclusion – Biogas Cover System  
 Assignment No.: 14-414**

Dear Ms. \_\_\_\_\_:

This is in response to your request for a legal opinion regarding whether the high-density poly-ethylene (HDPE) cover used in a biogas system qualifies for the active solar energy exclusion pursuant to Revenue and Taxation Code<sup>1</sup> section 73, subdivision (b)(3)(D). As explained below, it is our opinion that the HDPE cover does not qualify for the active solar energy exclusion.

### Facts

According to the attached letter from D \_\_\_\_\_ M \_\_\_\_\_ of \_\_\_\_\_, Inc., \_\_\_\_\_ is a renewable energy facility located in \_\_\_\_\_ County. The facility produces methane-rich biogas using dairy cow manure, which is pooled in an 8,000,000 gallon earthen pond, and then covered by an HDPE cover anchored into the ground around the pond to form a "covered lagoon digester." If the temperature in the covered lagoon is high enough, naturally-occurring bacteria in the manure metabolically digests calories in the manure and releases methane gas, which is captured under the cover and used as fuel for the onsite generator.

The HDPE cover provides solar energy to the \_\_\_\_\_ facility in the form of processed heat to raise and sustain the covered lagoon manure temperature and ensure the production of renewable biogas. The HDPE cover is made of black, solar-absorbent plastic to collect the sun's heat, transfers the heat to the manure under the cover, and holds the solar energy to catalyze the biological reaction that creates methane gas fuel for the facility. Mr. M \_\_\_\_\_ has submitted a claim for the active solar energy new construction exclusion, and specifies that the claim is limited to the portion of the property that collects, stores, and distributes solar energy in the form of process heat.

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

### 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. . . ." Section 71 requires the assessor to determine the added value for newly constructed property upon completion.

In 1980, voters of Proposition 7 approved an amendment to the California Constitution to read that the term "newly constructed" excludes "the construction or addition of any active solar energy system." (Cal. Const., art. XIII A, subd. (c)(1).) Section 73, enacted to implement article XIII A, subdivision (c)(1) of the California Constitution, provides that the term "newly constructed" shall not include the construction or addition of any active solar energy system. The active solar energy system new construction exclusion remains in effect until a subsequent change in ownership occurs. (Rev. & Tax. Code, § 73, subd. (f).)

Section 73, subdivision (b)(1) defines "active solar energy system" to mean:

[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.

As Mr. M indicates, section 73, subdivision (b)(3) lists qualifying uses for active solar energy systems, including processing heat. (Rev. & Tax. Code, § 73 subd. (b)(3)(D).) The threshold question, however, is whether the solar energy system at issue meets the definition of an "active solar energy system," as described in subdivision (b)(1). In 1981, Assembly Bill 375<sup>2</sup> clarified that section 73 was not applicable to passive solar energy systems. (Letter to Assessors (LTA) No. 2004/051 (September 20, 2004).) In addition, the Board of Equalization's *Guidelines for Active Solar Energy Systems New Construction Exclusion* describes examples of passive solar systems as "designed to optimize the collection of solar energy for heating, ventilation, and daytime lighting," as well as "inherent to the structural design and site of the building and contain[ing] no active components." (LTA No. 2012/053 (December 6, 2012), p. 18.)<sup>3</sup>

Here, the HDPE cover is anchored into the ground to cover a pond of dairy cow manure to form a "covered lagoon digester." The HDPE cover is black, made of solar-absorbent plastic to collect the sun's heat, which heats the manure underneath the cover, catalyzing the biological reaction that creates methane gas fuel for an onsite generator. Because the heat generated by the HDPE cover is used directly over the site it covers, it is not thermally isolated from the space where the energy is used. Therefore, in our opinion, the HDPE cover does not meet the section 73 definition of an "active solar energy system." In addition, the HDPE cover appears to be a

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<sup>2</sup> Stats. 1981, ch. 239.

<sup>3</sup>In addition, the Public Resources Code, which directs the State Energy Resources Conservation and Development Commission to perform research regarding energy-related problems, including the implications of government subsidies and taxation, defines "passive thermal system" as "a system which utilizes the structural elements of a building and is *not augmented by mechanical components* to provide for collection, storage and distribution of solar energy or coolness." (Emphasis added.) (Pub. Resources Code, §§ 25600, 25602.)

passive system, as it is designed to collect solar energy for heating, but contains no active or mechanical components. Therefore, we do not believe the HDPE cover qualifies for the active solar energy system new construction exclusion.

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: Mr. Dean Kinnee MIC:64  
Mr. Benjamin Tang MIC:64  
Mr. Todd Gilman MIC:70