



**LATE**

**To: Senator Gabbard, Chair  
Senate Committee on Energy and Environment**

**Senator Hee, Chair  
Senate Committee on Water, Land, Agriculture, and Hawaiian Affairs**

**From: Sopogy Inc.**

**Date: February 17, 2010**

**Subject: Support of SB 2923 – Relating to Solar Energy  
Thursday, February 18, 2010, 2:45 PM  
State Capitol, Conference Room 225**

Chair Gabbard, Chair Hee, and Members of the Committees:

Sopogy, Inc. ("Sopogy") is a solar power technology company based in Hawaii specializing in the research and development of various MicroCSP™ solar technologies that bring the economics of large solar energy systems to the commercial, industrial, and utility sectors.

Sopogy strongly supports SB 2923, which authorizes solar energy facilities on class B and C agricultural land, but views certain amendments to the bill as necessary in order to accomplish the goals of SB 2923.

The amendment to HRS Section 205-2 proposed by SB 2923 allows the facilities, but requires that solar energy facilities installed on agricultural B and C land provide energy to the agricultural operations thereon. First, the requirement of providing "energy" should be amended to make clear that all types of energy are permitted, not just power generation because to many, "energy" implies electricity. Certain solar technologies can be used to offset not only electricity needs, but also other fossil fuel-based needs, such as propane and synthetic gas. For example, Sopogy's MicroCSP™ technology can be designed to significantly reduce propane and synthetic gas consumption by providing solar powered process heat used during agricultural drying operations. Such a facility would reduce (and potentially eliminate) the agricultural operations' fossil fuel consumption and resulting air pollution. This reduction in gas consumption results in both operational cost savings for agricultural businesses as well as significant reductions in carbon emissions. As such, the requirement proposed by SB 2923 might read: ". . . the solar energy facility on the land shall provide energy requirements via a renewable energy source to offset the fossil fuel based needs of the agricultural operations on the land on which the solar energy facility is established . . ."

Second, Sopogy proposes the addition of "to the extent practicable", insertion of the phrase "some or all of" as follows: ". . .to offset some, or all of, the fossil fuel based needs . . .", or similar language to the section at issue. This change is important because the current language could be read to require that the solar facility offset *ALL* the energy needs of the agricultural operation located on the respective parcel of land. In many instances, this may not be possible due to limited space requirements, resource availability, pure technology limitations, or other reasons. For example, in the





case of electricity, certain solar technologies may not provide firm power, but will rather supply power intermittently during the day. Moreover, these technologies typically cannot provide power throughout an entire night. As such, the agricultural operation will likely need to purchase supplemental electricity during the periods of intermittency or the evening hours. Also, on certain parcels, it may be more cost effective and practicable to do a solar cooling project, which may offset propane and synthetic gas usage (as opposed to electricity), than a power generation project. As such, it is important to add language in recognition that solar facilities may not be able to provide for all energy needs, but to still allow for facilities that can provide for certain of an operation's energy needs.

With the foregoing amendments incorporated, SB 2923 will become important enabling legislation. A significant obstacle to the development of new renewable energy facilities is the difficulty of locating parcels of land with sufficient resource levels for each technology (for e.g., enough sun to power a solar facility). Moreover, certain parcels of land which might be ideal for projects is zoned industrial or commercial, which causes the cost of such parcels to exceed levels at which projects are financeable. Therefore, making additional agricultural land (much of which may be in ideal resource zones) available for alternative energy facilities will hopefully facilitate the deployment of additional projects by offering new prospective project locations at costs that may still make sense given the financial limitations of current renewable energy projects.

For the reasons set forth above, SB 2923 constitutes an important enabling step in achieving Hawaii's Clean Energy Initiative goal of the 70% renewable energy goal by 2030. Therefore, Sopogy, Inc. strongly supports SB 2923 and respectfully requests your passage of SB 2923 into law.

Thank you for this opportunity to testify.

Jon Ishikawa  
Energy Project Development Manager  
Sopogy - Solar Power Technology  
Direct Phone: (808) 457-5345  
Direct Fax: (808) 356-0565  
[www.sopogy.com](http://www.sopogy.com)



**HAWAII RENEWABLE ENERGY ALLIANCE**

46-040 Konane Place #3816, Kaneohe, HI 96744 – Telephone/FAX: 247-7753 – Email: wsb@lava.net

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Warren S. Bollmeier IIVice-President  
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RENEWABLE ENERGY ALLIANCE BEFORE THE SENATE COMMITTEES ON  
ENERGY AND ENVIRONMENT, AND WATER, LAND, AGRICULTURE AND  
HAWAIIAN AFFAIRS

SB 2923, RELATING TO SOLAR ENERGY

February 18, 2010

Chairs Gabbard and Hee, Vice-Chairs English and Tokuda, and members of the Committees, I am Warren Bollmeier, testifying on behalf of the Hawaii Renewable Energy Alliance (HREA). HREA is an industry-based, nonprofit corporation in Hawaii established in 1995. Our mission is to support, through education and advocacy, the use of renewables for a sustainable, energy-efficient, environmentally-friendly, economically-sound future for Hawaii. One of our goals is to support appropriate policy changes in state and local government, the Public Utilities Commission and the electric utilities to encourage increased use of renewables in Hawaii.

The purpose of SB 2923 are to: (i) authorize solar energy facilities on class B and C agricultural land; and (ii) require the solar energy facility on class B and C land to provide for the energy requirements via a renewable energy source for the agricultural operations on the land on which the solar energy facility is established.

HREA strongly supports this bill, as it provides clear guidance to approving agencies that solar is a permissible use in the agricultural district on class B and C agricultural land. In support:

1. Expansion of Existing Law. HREA applauds the proposed expansion of solar to Class B and C, in addition to the existing law which includes solar as a permissible use on Class D and E land, as it will help us meet our state energy goals.
2. Serve Site Load and/or Deliver Net Electricity to the Utility? In addition to serving the local ag site load, e.g., for example under a net energy metering agreement, we encourage the Committees to consider allowing for sale of excess power to the utility under a power purchase agreement, such as a Feed-In Tariff.
3. Fostering Additional Investment for Solar in Hawaii. This measure will open up additional opportunity for investment in solar in Hawaii. This will help bring additional dollars and jobs to Hawaii's economy, just when we really need the infusion.

Thank you for this opportunity to testify.