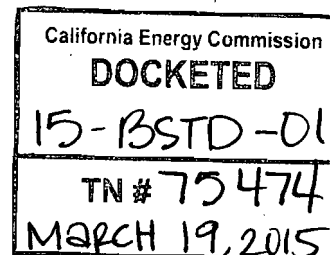




Solar Rating & Certification Corporation™
The Industry Standard Since 1980.

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Danny Tam
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California Energy Commission
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Dear Mr. Tam,

Thank you for the opportunity to respond to the comments filed on the 2016 update of the Title 24 Building Efficiency Standard.

The SRCC is a non-profit organization whose primary purpose is to provide authoritative performance ratings, certifications and standards for solar thermal products, with the intention of protecting and providing guidance to consumers, incentive providers, government, and the industry. SRCC developed Standard 100 in the late 1980's. SRCC began certifying solar collectors in 1980 and after a few years realized that it is really a complete solar water heating system that is purchased by the consumer. To address the other components of the system, as well as its installation (which is critical to successful operation), SRCC initiated discussion with all interested stakeholders to develop a certification program for complete solar water heating systems. After extensive development, Standard 300 was published in 1989. More recently, SRCC joined the International Code Council (ICC) in 2014 as a member of the ICC Family of Companies.

To date, 384 companies have been certified by the SRCC. SRCC has certified nearly 700 solar thermal collectors and more than 1000 solar thermal water heating systems to SRCC standards. SRCC standard development is accomplished through an open and balanced consensus process that is designed to be consistent with other well-known standard development processes, such as ANSI. We make the documents available, free of charge on our website at <http://www.solar-rating.org>.

We welcome the opportunity to respond to the comments filed by IAPMO since they are incorrect at several points and also lack some key information. Our responses are as follows:

1. Title 24 has long referenced OG-100 and OG-300. We believe the reference is in the best interest of the consumers and the industry. OG-100 and OG-300 were developed over 30 years ago by a group of states, industry stakeholders and the U.S. Department of Energy. Contrary to the assertion by IAPMO that the documents are "obsolete", they are both continuously updated. While it is correct that portions of the document have been moved to a separate SRCC Standard 100 document, OG-100 directly references

Standard 100, and in doing so, incorporates all Standard 100 material. The same is true of the OG-300 and Standard 300. All documents are available free of charge for download on SRCC's website at www.solar-rating.org.

2. Standard 100 and 300 have been developed using SRCC's consensus standard development process. This process is recognized by numerous organizations who reference the standards including, IAPMO. Examples include:

- International Association of Plumbing and Mechanical Officials (IAPMO) references Standard 100 in the Uniform Solar Energy Code (USEC)
- International Code Council references Standard 100 in the 2015 International Residential Code (IRC)
- U.S. EPA references Standard 300 in the ENERGY STAR Residential Water Heater Specification
- U.S. Internal Revenue Service references SRCC for products qualifying for Residential Energy Tax Credits

Many jurisdictions within California and other states and utility incentive programs around the country (see the U.S. DOE [Database of State Incentives for Renewables & Efficiency](#) for listings). A few examples of entities in CA citing SRCC's OG-100 and 300 standards include:

- Sacramento Municipal Utility District (SMUD)
- West Riverside COG HERO Financing Program
- City of Palo Alto Utilities - Solar Water Heating Program, and the City of Los Angeles (through the adoption of the Uniform Solar Energy Code).

Development of new versions of Standard 100 and Standard 300 have been completed and they are in the process of being submitted to ANSI for accreditation. Upon approval, the references to the standards in OG-100 and OG-300 will be updated to the new versions.

3. SRCC maintains a collector rating system detailed in document RM-1 *Methodology for Determining the Thermal Performance Rating for Solar Collectors*, and TM-1 *Solar Thermal Component Test and Analysis Protocol* which has also been developed using SRCC's consensus standard development process. The latest versions of each are available for free download on the [SRCC website](#). While IAPMO is developing a competitive rating system based on a draft standard they have entitled S1001.4, it has yet to be completed and therefore is not yet eligible for ANSI designation. It is critical to note that it is not yet clear that S1001.4 will provide ratings that are comparable to the RM-1/TM-1 ratings California, the federal government and many other states have used for many years. Introducing a new and unproven rating system into the industry at this point has the potential to create significant market confusion, undermining California's efforts to promote the use of solar systems. If this were to happen, the same system could receive one rating number from a new IAPMO rating system, and another from the existing rating system. Such a move could seriously undermine the state's efforts to streamline and promote solar and the very real possibility of "gaming" of conflicting ratings systems. We believe that the continued use of one consistent rating metric for solar collectors in CA should absolutely be maintained.
4. OG-100 is already used CA state law in the Solar Water Heating and Efficiency Act of 2007 ([CAL. PUC. CODE § 2864 : California Code - Section 2864](#)), which specifically

requires OG-100 and OG-300 certification. Any changes to the reference to these documents in Title 24 would create a conflict with this existing state code.

5. As currently written, the language does allow for the testing to be performed by organizations other than SRCC to obtain ratings as spelled out in the RM-1 and TM-1 documents that are referenced by OG-100 and OG-300. Note that the current RA4.4.20 language permits other testing agencies approved by the Executive Director (see below). Therefore, IAPMO's allegation of a "sole source" and "anti-competitive effects" is unfounded. For this reason, SRCC believes that the RA4.4.20 language should be retained in its present form as stated below:

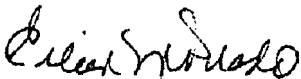
RA4.4.20 Solar Water Heating Systems

Solar water-heating systems and/or collectors shall be certified and rated by the Solar Rating and Certification Corporation (SRCC) or by a testing agency approved by the Executive Director.

In summary, SRCC's OG-100 collector certification and OG-300 system certification programs have provided consistent ratings that are recognized by many incentive programs in California, neighboring states and the federal government. Introducing a competing program has the potential to increase costs, slow implementation, and produce confusion and delay in the California solar industry's growth.

SRCC appreciates the opportunity to address these comments, and we would be happy to answer any other questions on this important matter as they arise.

Sincerely,



Eileen Prado
Executive Director