



August 20, 2014

**Advice No. 51**  
**(Center for Sustainable Energy)**

**Advice No. 4682**  
**(Southern California Gas Company – U 904-G)**

**Advice No. 3503-G**  
**(Pacific Gas and Electric Company – U 39 M)**

**Advice No. 3096-E**  
**(Southern California Edison – U 338-E)**

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA  
ENERGY DIVISION

**SUBJECT: Proposed Revisions to Incentive Levels for Solar Pool Heating Systems and Additional Amendments to the California Solar Initiative-Thermal Program Handbook**

**PURPOSE**

The Center for Sustainable Energy (CSE), formerly known as the California Center for Sustainable Energy (CCSE), on behalf of the California Solar Initiative-Thermal (CSI-Thermal) Program Administrators (PAs),<sup>1</sup> hereby submits this advice filing to propose a decrease in the incentive rates for solar pool heating systems and propose other amendments to the CSI-Thermal Program Handbook.

**BACKGROUND**

On January 21, 2010, the California Public Utilities Commission (Commission or CPUC) approved Decision (D.) 10-01-022, *Decision Establishing the California Solar Initiative Thermal Program to Provide Solar Water Heating Incentives*. In Section 14.2 of D.10-01-022, the Commission states:

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<sup>1</sup> The CSI-Thermal PAs are Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), Southern California Gas Company (SoCalGas), and CSE in the service territory of San Diego Gas & Electric Company (SDG&E).

On an ongoing basis, in response to program experience and evaluation, or when a Commission decision or statutory change requires handbook updates, the PAs shall submit CSI Thermal Program Handbook changes through the advice letter process.<sup>2</sup>

Additionally, on August 15, 2013, the Commission approved D.13-08-004, *Decision to Incorporate Solar Pool Heating Systems into the California Solar Initiative – Thermal Program*. In section 3.8 of the Decision, with respect to incentive levels for solar pool heating systems, the Commission states: “We will allow the PAs to file a Tier-2 Advice letter, if they subsequently find incentives are too high.”<sup>3</sup>

Accordingly, in this advice filing, CSE, on behalf of the CSI-Thermal PAs, hereby requests the lowering of the incentive rates for solar pool heating systems in compliance with Assembly Bill (AB) 2249 (Stats. 2012, ch. 607). The PAs believe that the current \$7 per therm rate is overly generous and therefore offsets a higher than anticipated portion of the installation costs. Lowering the incentive rates will meet the needs of the majority of the solar water heating community and will continue to promote and encourage the installation of solar pool heating systems.

Additionally, CSE, on behalf of the CSI-Thermal PAs, hereby submits other proposed revisions to the CSI-Thermal Program Handbook. The revisions will allow the PAs to further simplify the application submittal process as well as provide clarity to various sections of the CSI-Thermal Program Handbook.

## **SUMMARY OF PROPOSED AMENDMENTS TO THE CSI-THERMAL PROGRAM HANDBOOK**

The proposed revisions to the current version of the CSI-Thermal Program Handbook are summarized below and shown in redline format in Attachment A to this advice filing.

### **Proposal to Reduce Incentive Levels for Solar Pool Heating Systems**

Affected Section(s): 5.3

The PAs have reviewed and analyzed over fifty (50) solar pool heating system applications and are recommending the reduction of the incentive rates based on Table 1 below, as follows: reduction for Step 1 and 2 to \$5 per therm; for Step 3 to \$4 per therm; and for Step 4 to \$3 per therm.

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<sup>2</sup> D.10-01-022, page 73.

<sup>3</sup> D.13-08-004, page 18.

The PAs' original assumptions were based on much higher than anticipated installation costs for swimming pools. However, the results indicate that solar pool heating system installation costs are substantially lower, thus the current incentive results in a far greater offset than expected and should be lowered. The reduction of the incentive levels will be more in line with the original goal of offsetting approximately half of the installation costs. The costs of unglazed polymer collectors and plastic PVC piping used for solar pool heating applications, along with simplified installation requirements, have allowed for solar pool heating systems to be installed at almost half of the PAs' original estimate.

This effort is in line with the goal of achieving the installation of natural gas-displacing solar thermal systems that displace 585 million therms (equivalent to 200,000 single-family residential systems) over the 25-year life of the systems. By reducing the incentive levels for solar pool heating systems, more funds will be available for additional installations at a lower incentive level, which would displace a higher number of therms.

Table 1

Proposed Solar Pool Heating System Incentive Steps

Step	Incentive per Annual Therm Displaced for Solar Pools	Maximum Incentive Multifamily/Commercial Projects
1	\$5.00	\$500,000
2	\$5.00	\$500,000
3	\$4.00	\$500,000
4	\$3.00	\$500,000

**Additional Proposed Amendments to the CSI-Thermal Program Handbook**

Changed California Center for Sustainable Energy (CCSE) to Center for Sustainable Energy (CSE) to reflect the organization's name change

Affected Sections: Multiple sections throughout

Updating OG-300 & 100 to follow current nomenclature of Standard 100 & 300

Affected Sections: Multiple Sections throughout

Clarified Oversizing rules

Affected Section: 2.5.1

Clarified Stagnation/Overheat Protection

Affected Sections: 2.5.3, 3.5.3, 4.5.3, 5.5.3

Updated the minimum SOF permitted for Standard 300 solar water heating systems  
Affected Section: 2.4.1, 2.6.1, 13.1.3, Appendix D

Clarified natural gas eligibility for new construction to be consistent with other chapters  
Affected Section: 3.2.1

Clarified incentive limitations to be consistent with other chapters and clarify tilt and azimuth requirements for multifamily/commercial systems  
Affected Section: 3.3.3, 4.3.3, 5.3.1

Removed Surface Orientation Factor restriction for multifamily/commercial systems  
Affected Sections: 3.4.1

Clarified freeze protection for multifamily/commercial and solar pool systems  
Affected Sections: 3.5.2, 4.5.2, 5.5.2, 12.2

Added a section on requirements for roof mounting of unglazed collectors  
Affected Sections: 3.5.8, 4.5.8, 5.5.8

Clarified how applications will be treated in the event of a calculator change  
Affected Sections: 3.6.2, 5.6.2

Included Ineligible equipment section for PBI systems to be consistent with other chapters  
Affected Section: 4.4.1

Included general information about installation requirements to be consistent with other sections  
Affected Section: 4.5

Updated Eligible Equipment for Solar Pool Systems  
Affected Sections: 5.4

Removed erroneous requirement that multifamily/commercial systems must be installed according to SRCC or IAPMO standards and guidelines  
Affected Sections: 3.5, 5.5

Updated and clarified freeze protection requirements for solar pool systems. Most details will be included in the CSI-Thermal Program Inspection Checklist.  
Affected Sections: 5.5.2, 5.7.1, C.24, Appendix O

Updated CPM metering requirements for solar pool systems  
Affected Sections: 5.5.4

Clarified PBI requirements for combination systems including a solar pool system  
Affected Sections: 5.5.4.3

Clarified energy efficiency/pool cover requirements for solar pool systems

Affected Section: 5.5.5

Removed requirement for solar pools applications to submit an energy efficiency audit report

Affected Section: 5.5.5, 5.7.1

Updated requirements for roof mounting of unglazed collectors for solar pool systems

Affected Section: 5.5.8

Removed requirement for solar pool systems that the estimated annual energy savings cannot exceed actual gas usage based on the last twelve months of utility bills prior to solar installation

Affected Section: 5.6.1

Increase the pool system size that required application fees from >30kWth to >50kWth

Affected Sections 5.7.1, Table 18

Included additional required documents for solar pool applications

Affected Section: 5.7.2, C.24, Appendix O

Added exemption for solar pool systems to require pipe insulation

Affected Section: 8.2

Allowed a pool cover to be included in the total eligible project costs for a solar pool system application

Affected Section: 11.1

Reorganized and updated freeze protection section to clarify different requirements for non-pool end user and solar pool systems

Affected Section: 12.2

Clarified requirements for drainback systems with unglazed collectors on a flat roof

Affected Section: 12.2.6

Added that the CSI-Thermal Inspection Checklists shall be the prime documents for specific technical requirements and may be updated based on experience gained from inspecting and observing installations

Affected Section: 13.1

Added clarification for failure items; protection from ultraviolet radiation and back thermosiphon prevention

Affected Section: 13.1.3

Updated language for roof penetrations

Affected Section: 13.1.3

Clarified the requirements for owners' manuals and added instruction for manual drainage for seasonal solar pool systems

Affected Section: 13.1.3

Added definition of seasonal pools

Affected Section: Appendix B

Added definition of surface orientation factor

Affected Section: Appendix B

Clarified PBI metering requirements

Affected Section: Appendix I

**TIER DESIGNATION**

Pursuant to General Order (GO) 96-B, Energy Industry Rule 5.2, this Advice Letter is submitted with a Tier 2 designation.

**PROTESTS**

Anyone wishing to protest this Advice Letter may do so by letter sent via U.S. mail, by facsimile or electronically, any of which must be received no later than September 9, 2014, which is twenty (20) days after the filing of this Advice Letter. Protests should be mailed to:

CPUC Energy Division  
Attention: Tariff Unit  
505 Van Ness Ave., 4<sup>th</sup> Floor  
San Francisco, CA 94102  
Email: [EDTariffUnit@cpuc.ca.gov](mailto:EDTariffUnit@cpuc.ca.gov)

Copies of the protest should also be sent to the attention of the Director, Energy Division, Room 4004, at the address shown above.

A copy of the protest should also be sent via e-mail and U.S. mail to CSE at the address shown below on the same date it is mailed or delivered to the Commission:

**For CSE:**  
Sachu Constantine  
Director of Policy  
Center for Sustainable Energy  
9325 Sky Park Court, Suite 100  
San Diego, California 92123  
E-mail: [sachu.constantine@energycenter.org](mailto:sachu.constantine@energycenter.org)

**For SoCalGas:**

Attn: Sid Newsom  
Tariff Manager - GT14D6  
555 West Fifth Street  
Los Angeles, CA 90013-1011  
E-mail: [snewsom@SempraUtilities.com](mailto:snewsom@SempraUtilities.com)

**For SCE:**

Megan Scott-Kakures  
Vice President of Regulatory Operations  
Southern California Edison Company  
8631 Rush Street  
Rosemead, California 91770  
E-mail: [AdviceTariffManager@sce.com](mailto:AdviceTariffManager@sce.com)

Mike R. Hoover  
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**For PG&E:**

Brian K. Cherry  
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There are no restrictions as to who may file a protest, but the protest shall set forth specifically the grounds upon which it is based and shall be submitted expeditiously.

**EFFECTIVE DATE**

CSE requests that this Advice Letter become effective on regular notice, September 19, 2014, which is thirty (30) calendar days after the date of filing. To implement the changes requested in the Advice Letter, the PAs request seven (7) calendar days upon approval of this Advice Letter to implement the new incentive levels for solar pool applications in the statewide database and forty five (45) calendar days upon approval of this Advice Letter to implement all other relevant changes in the statewide database.

**NOTICE**

CSE is providing a copy of this Advice Letter to service list R.12-11-005.

A handwritten signature in black ink, appearing to read 'Sachu' followed by a stylized, cursive signature.

Sachu Constantine  
Director of Policy  
Center for Sustainable Energy

Attachments:

Attachment A – Redline California Solar Initiative-Thermal (CSI-Thermal) Program Handbook  
illustrating proposed amendments

cc: Service List R.12-11-005