

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking Regarding  
Policies, Procedures and Rules for the  
California Solar Initiative, the Self-Generation  
Incentive Program and Other Distributed  
Generation Issues.

Rulemaking 12-11-005  
(Filed November 8, 2012)

**THE DIVISION OF RATEPAYER ADVOCATES' COMMENTS  
ON THE PROPOSED DECISION OF PRESIDENT PEEVEY TO MODIFY  
DECISION 10-01-022 TO EXPAND TECHNOLOGIES INCENTIVIZED  
UNDER THE CALIFORNIA SOLAR INITIATIVE THERMAL PROGRAM**

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## I. INTRODUCTION

Pursuant to Rule 14.3 of the Commission's Rules of Practice and Procedure, the Division of Ratepayer Advocates (DRA) submits the following comments on the January 14, 2013 Proposed Decision of President Peevey to expand technologies incentivized under the California Solar Initiative Thermal (CSI-Thermal) Program (PD). The PD would expand CSI-Thermal incentive eligibility, as recommended by an Energy Division Staff Proposal for Program Modification (Staff Proposal), to include solar process heat, solar cooling, single-family combination water/space heating systems (contingent on approval by a qualified standards body), and commercial/multi-family combination systems.

In addition to expanding CSI-Thermal to include the above newly eligible systems, the PD changes the payment of most incentives to a performance-based incentive (PBI). The PD requires payment of incentives via PBI for all process heat, solar cooling and combination systems, (except for single-family combination), and would require PBI for all solar water heating systems larger than 250 kilowatts thermal ( $\text{kW}_{\text{th}}$ ). DRA generally supports the PD as discussed below, but recommends several clarifications:

- The cost-effectiveness of each technology/system type should improve each year (with specified targets); increasing cost-effectiveness should be the primary indicator of "success."
- Subsidies should decline either yearly, or based on measured cost reductions.
- The program should be designed with the explicit purpose of removing ratepayer subsidies at a specified date – DRA recommends January 1, 2017, consistent with the enabling legislation – to properly set market expectations upfront.

## II. DISCUSSION

### A. **The Commission should adopt the PD's determination to pay incentives based on performance rather than an upfront lump sum based on estimated energy savings.**

DRA agrees that performance-based incentives (PBI) are the best way to deliver CSI-Thermal incentives to larger systems and non-solar water heating systems, consistent with the PD's reasoning that "paying rebates on the basis of actual system performance over time can act as an incentive for

system owner[s] to ensure the system is operating at maximum efficiency.”<sup>1</sup> A performance-based payment spread over two years, as described in the PD, strikes a good balance of competing factors, namely the need to maximize system performance versus incremental metering and administrative costs necessary for determining actual energy savings from these systems.

**B. The Commission should revise the PD to outline a concrete strategy to promote market transformation for each of the newly eligible technologies/system types.**

While DRA supports expanding the availability of CSI-Thermal incentives to non-solar water heating systems based on system performance, it is sub-optimal to increase system eligibility without developing a strategy, or program logic model, that demonstrates how incentives will help lead to market transformation. A disciplined approach would follow key steps, including accurately defining and characterizing the relevant “market;” developing a coherent logic model that demonstrates a solid cause and effect relationship between the proposed intervention and the desired outcome(s); and identifying data needs and establishing baselines in order to effectively track progress toward the desired outcome(s).<sup>2</sup> At minimum, DRA recommends establishing realistic goals regarding the use of these incentives to facilitate progress toward a self-sustained solar thermal market. Public Utilities Code §2862(m) requires no less:

“It is the intent of the Legislature that this article [Solar Water Heating and Efficiency Act of 2007] will encourage the cost-effective deployment of solar heating systems in both residential and commercial markets and in each end-use application sector in a balanced manner. It is the intent of the Legislature that the commission monitor and adjust incentives created by the article so that they are cost-effective investments sufficient to significantly increase markets and promote market transformation. It is the intent of the Legislature that the commission ensure that increased, uniform growth in each market sector is achieved through program incentives or structure adjustments that prevent overutilization of program resources by any single sector.”

More fundamentally, in order to maximize the ratepayer value of incentives, it is critical to establish a path to a self-sustained market, for each of the technologies/system types. To this end, the Commission should establish the three objectives discussed below.

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<sup>1</sup> PD, p. 15. DRA’s March 18, 2011 post-workshop comments also recommended PBI over upfront lump-sum payments for non-solar water heating systems. Available at: <http://www.cpuc.ca.gov/NR/rdonlyres/1BCBBD93-05B8-46A2-B88D-BDD33779C128/0/DivisionofRatepayerAdvocates.pdf>

<sup>2</sup> DRA’s November 21, 2011 comments following the November 7, 2011 Market Transformation Indicators workshop in R.09-11-014 outline thirteen steps that are critical in developing a market transformation plan: available at <http://docs.cpuc.ca.gov/PublishedDocs/EFILE/CM/154061.PDF>

**1. The cost-effectiveness of each technology/system type should improve each year (with specified targets); increasing cost-effectiveness should be the primary indicator of “success.”**

The Commission should be prepared to gather relevant data for assessing the long-term market viability of these technologies/system types. At minimum, equipment cost and installed cost should be estimated prior to the proposed changes taking effect, in order to set a benchmark against which to track future estimates of these costs. The PD should require the CSI-Thermal Program Administrators (PAs) to specify how the CSI-Thermal database, Measurement & Evaluation plan, and other tools will be utilized to track market adoption, cost and other ‘performance’ metrics, and what modifications, if any, are required for such tracking.

**2. Subsidies should decline either yearly, or based on measured cost reductions.**

Incentive rates should strike a balance between (1) consistency with the value provided and (2) facilitating sustainable progress toward a market devoid of ratepayer subsidies. The enabling legislation for the CSI-Thermal program made clear the Legislature’s intent that incentives should help lower prices and create “a self-sufficient market that will sustain itself beyond the life of this program,” and further that the Commission “prevent overutilization of program resources by any single sector.”<sup>3</sup> Thus when the PD notes “concerns that the current incentive levels may be too high for process heat applications,” for example, DRA suggests that Step 1 incentives for process heat start at an amount lower than the implied quarterly amount.<sup>4</sup>

The same consideration should be taken into account for setting appropriate incentive levels for all eligible technologies/system types. The PD does not specify incentive rates, or a transparent process for determining them. It is implied that the PD intends to adopt the incentive rate as described in the January 27, 2012 Staff Proposal,<sup>5</sup> which would mean that Step 1 PBI payments would be approximately \$0.14/kWh for single-family electricity displacing systems (one quarter of \$0.54) and

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<sup>3</sup> Public Utilities Code §§2862(k) and (m) as enacted by Assembly Bill 1470 (2007). DRA also emphasized this point in its November 25, 2009 opening comments on the proposed decision adopting the solar water heating program (D.10-01-022), available at <http://docs.cpuc.ca.gov/PublishedDocs/EFILE/CM/110478.PDF>.

<sup>4</sup> PD, p. 20

<sup>5</sup> Administrative Law Judge’s Ruling Requesting Comment on California Solar Initiative Thermal Program Staff Proposal, filed January 27, 2012 in R.10-05-004, Appendix at p. 15.

\$4.65/therm for single-family gas displacing systems (one quarter of \$18.59).<sup>6</sup> However, the PD does not explicitly address this, so it is not possible to assess the viability of incentive levels to achieve either of the two objectives identified above. DRA recommends that the CSI-Thermal PAs, as part of the Tier 3 advice letter filing ordered by the PD. The PD should also state explicitly that no discount rate will be applied to calculate PBI payments, in order to prevent a budget shortfall.<sup>7</sup>

**3. The program should be designed with the explicit purpose of removing ratepayer subsidies at a specified date – DRA recommends January 1, 2017, consistent with the enabling legislation – to properly set market expectations.**

There may be barriers to the growth of the solar thermal market in California unrelated to cost, and incentives alone may not address such barriers effectively. Additional provisions – such as educating consumers about the benefits of the new CSI Thermal applications and enlisting supplier support for the new CSI Thermal applications – that, together with incentives, reflect a more holistic approach to sustainable market transformation, should be made to ensure that progress in the solar thermal market will persist after subsidies are removed.

At minimum, since the proposed technologies/system types are new to the CSI-Thermal program, basic customer safeguards should be provided. One way would be to include warranty and/or bonding requirements. Furthermore, DRA recommends that the CSI-Thermal PAs seek industry participants'/experts' input regarding technical specifications, with the express purpose of balancing performance requirements with minimizing barriers to sustainable market development.

### **III. CONCLUSION**

DRA supports the PD's determination to expand eligibility of CSI-Thermal incentives to certain non-solar water heating systems, and further to require that these systems (except for single-family combination) take incentives based on actual energy production. DRA also supports the PD's requirement that solar water heating systems greater than 250 kW<sub>th</sub> receive payment based on actual production. DRA recommends clarifying the PD to reflect the requirements of Public Utilities Code Section 2862(m) that ratepayer incentives of eligible systems will lead to cost reductions and a self-sustained solar thermal market beyond the life of the CSI-Thermal program.

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<sup>6</sup> Per D.12-08-008, Decision Modifying Decision 10-01-022 to Adjust Incentive Structure in the California Solar Initiative Thermal Program, at Appendix A.

<sup>7</sup> See D.11-12-019, p. 2.

Respectfully submitted,

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## APPENDIX A

### **Proposed Changes to Conclusions of Law and Ordering Paragraphs of the PD**

#### **Conclusions of Law**

7. PBI funding should be capped at 100% of the estimated incentive and the incentive should not be calculated using a discount rate.

13a The CSI-Thermal PAs should be responsible for estimating equipment cost and installed cost prior to the proposed changes taking effect, in order to set a benchmark against which to track future estimates of these costs. The CSI Thermal PAs should specify how the CSI-Thermal database, Measurement & Evaluation plan, and other tools will be utilized to track market adoption, cost and other ‘performance’ metrics, and what modifications are required for such tracking.

13.b The CSI-Thermal PAs should seek industry participants’/experts’ input regarding technical specifications, with the express purpose of balancing performance requirements with minimizing barriers to sustainable market development, and should explore the inclusion of warranty and/or bonding requirements for newly eligible systems.

13c. The CSI-Thermal PAs should propose PBI incentive structures that would maximize the potential for long-term, sustained cost reductions for each of the newly eligible technologies/system types.

23. The CSI-Thermal PAs should have 120 days after the issuance of this decision to file Tier 3 Advice letters to revise the CSI Thermal Handbook as directed by this Decision. The Tier 3 Advice letters should outline steps for achieving a self-sustained market by 2017, including the establishment of appropriate baselines from which to track and report progress each year, and (2) propose PBI incentive structures that would maximize the potential for long-term, sustained cost reductions for each of the newly eligible technologies/system types, The Tier 3 Advice letters should state that no discount rate should be used in calculating performance incentives.

#### **Ordering Paragraphs**

2. Within 120 days of the effective date of this decision, the California Solar Initiative (CSI)-Thermal Program Administrators; namely Pacific Gas and Electric Company, Southern California Gas Company, Southern California Edison Company and the California Center for Sustainable Energy, must submit Tier 3 advice letters with a revised CSI Thermal Program Handbook incorporating the program changes directed by this Decision as set forth in the conclusions of law and in Appendix A.