

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 JOINT  
IMPLEMENTATION PLAN OF THE CALIFORNIA CENTER FOR SUSTAINABLE  
ENERGY, PACIFIC GAS AND ELECTRIC COMPANY, AND SOUTHERN CALIFORNIA  
GAS COMPANY TO INCORPORATE SOLAR HEATING POOL SYSTEMS INTO THE  
CALIFORNIA SOLAR INITIATIVE THERMAL PROGRAM**

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## I. INTRODUCTION

Pursuant to the guidance provided at the March 13, 2013 prehearing conference and Administrative Law Judge Katherine MacDonald's March 20, 2013 e-mail, the Division of Ratepayer Advocates (DRA) submits the following comments on the May 8, 2013 "Joint Implementation Plan of the California Center for Sustainable Energy, Pacific Gas and Electric Company, and Southern California Gas Company (The Program Administrators (PAs)) to Incorporate Solar Heating Pool Systems into the California Solar Initiative Thermal Program" (Joint Implementation Plan). The Joint Implementation Plan follows an April 23, 2013 workshop (Workshop) that considered issues related to California Solar Initiative (CSI) Thermal Program eligibility of solar heating pool systems based on the passage of Assembly Bill ("AB") 2249 (Stats. 2012, ch. 607).

DRA offers the following recommendations to improve the Joint Implementation Plan:

- Incentives should start at \$4 per annual therm displaced as originally proposed by the PAs; however, if participation does not reflect adequate uptake within six months of the implementation, the Commission may allow the PAs to increase the Step 1 (or 2) incentives for solar pool heating up to \$7 per annual therm displaced.
- The Option 1 incentive budget appears preferable in terms of administrative efficiency, but would leave less funding available for multifamily/commercial solar water heating systems if the \$7 per annual therm displaced incentive level is maintained for solar pool heating systems.
- The calculator should not include an assumption that all pools will have a pool cover; more broadly, if performance based incentives (PBI) are not required, the calculator should enable estimation of therm savings from solar pool heating systems as accurately as possible.

## II. DISCUSSION

### A. **The Commission should establish a starting incentive rate of \$4 per annual therm displaced.**

The Joint Implementation Plan recommends an initial incentive rate of \$7 per annual therm displaced.<sup>1</sup> This is significantly higher than the \$4 per annual therm displaced discussed at the Workshop. Participants at the Workshop expressed concern (but did not provide data) that \$4 per therm displaced was too low to significantly increase use of solar pool heating systems. The proposal attempts to respond to those concerns, again without providing data, that \$7 per annual therm displaced is the "right" amount at this time. Given the lack of data on starting incentive rate that would most effectively

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<sup>1</sup> Joint Implementation Plan, p. 4.

promote market transformation, DRA supports the use of \$4 per annual therm displaced as initially presented, with the option to increase that amount if customer participation is deemed too low. The risk of setting the rate too high versus too low is asymmetric. If the initial incentive rate is higher than needed to promote use of solar pool heating systems, the funds will be depleted (and depending on whether Option 1 or 2 of the budget proposal is adopted, may impact other solar heating technologies as well). If the initial incentive rate is lower than it needs to be to promote use of solar pool heating systems, then the amount of the incentive can be adjusted to a higher level.

The Commission considered a similar issue when establishing PacifiCorp's Solar Incentive program.<sup>2</sup> In that case, DRA recommended a lower initial incentive than the one PacifiCorp proposed. Both PacifiCorp and DRA agreed that in the event the initial incentive rate was too low to attract sufficient participation, PacifiCorp should be authorized to file a Tier 2 Advice Letter implementing a higher incentive rate. The AL would include an updated budget worksheet reflecting the incentive increases. The Commission adopted this proposal, allowing PacifiCorp to request a higher incentive rate after six months of experience with the lower incentive rate.<sup>3</sup>

Through informal discussion following the Workshop, DRA learned that the PAs received further input from some of the Workshop participants regarding the optimal incentive level for solar pool heating systems. According to market participants in the solar pool heating market, the \$4 per annual therm displaced incentive proposed at the Workshop would not reduce participants' capital outlay sufficiently to result in a three- to five-year payback period. While this communication was helpful, the market participants failed to provide any evidence on the record regarding what payback period is associated with a \$4 incentive versus a \$7 incentive.<sup>4</sup> DRA recommends the Commission establish incentive levels based on data and evidence, rather than on anecdotal workshop discussion.

In addition, it is unclear that all potential participants will require such a payback period. For example, the 2010 Self-Generation Incentive Program Market Characterization Report explained that a

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<sup>2</sup> D.11-03-007, p. 7.

<sup>3</sup> D.11-03-007, p. 7. PacifiCorp did not need to raise the initial incentive rate, and its residential program is in step 5 of seven steps, and the non-residential program is in step 7 of seven steps.  
<http://www.pacificpowercasolar.com/solar-incentives.html>

<sup>4</sup> DRA did receive one of the market participants' "incentive value calculator," which included calculations of simple payback periods for systems in different climate zones, with and without a pool cover. This calculator has not been made available to parties in the R.12-11-005 proceeding.

significant proportion of customers (both participants and non-participants) were willing to accept a payback period of six to ten years.<sup>5</sup> Participation in PacifiCorp’s solar incentive program demonstrates the willingness of customers to install solar photovoltaic programs despite a payback period that exceeded five years. PacifiCorp proposed an incentive rate beginning at \$2.80 per watt and declining to \$1.80 per watt.<sup>6</sup> The payback period under that proposal was calculated at 13-14 years. Ultimately, the Commission adopted an incentive proposal that began at \$2.00 per watt and declined to \$0.36 per watt,<sup>7</sup> meaning that the payback period was likely even longer than 13-14 years. Nevertheless, PacifiCorp’s solar incentive program, which began in July 2011, is currently in step 5 for residential customers and step 7 for commercial customers, demonstrating customer willingness to participate in a solar incentive program with a payback period in excess of five years.<sup>8</sup>

More generally, it is challenging to assess what incentive level would allow participants to achieve their desired payback period, especially given the variability of circumstances that affect sizing, natural gas prices, solar technology pricing and, thus, the amount of the capital investment. Given this uncertainty, and the asymmetric risk of setting the incentive level too high as described above, DRA recommends setting the Step 1 (and/or Step 2) incentive level at \$4 per annual therm displaced but allowing the PAs to adjust it up to \$7 per annual therm displaced if participation is low after six months of experience with the lower incentive rate.<sup>9</sup>

#### **B. Option 1 vs. Option 2 Incentive Budget.**

The Joint Implementation Plan states that the proposed Option 1 incentive budget “would take less administrative dollars to implement and would allow the market to determine its own adoption rate.”<sup>10</sup> While Option 1 appears more administratively efficient than Option 2, it is important to note that the proposed Step 1 and 2 incentive levels of \$7 per annual therm displaced would more quickly

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<sup>5</sup> Self-Generation Incentive Program Final Market Characterization Report, submitted February 16, 2010, available at [http://www.cpuc.ca.gov/NR/rdonlyres/EAEF4051-300A-4915-948F-FAD8E706F8AB/0/SGIP\\_market\\_characterization\\_report.pdf](http://www.cpuc.ca.gov/NR/rdonlyres/EAEF4051-300A-4915-948F-FAD8E706F8AB/0/SGIP_market_characterization_report.pdf), Section 3.3 (Customers’ Payback Thresholds).

<sup>6</sup> D.11-03-007, p. 12.

<sup>7</sup> D.11-03-007, Table 6: Adopted Budget, p. 20.

<sup>8</sup> See <http://www.pacificpowercasolar.com/solar-incentives.html>

<sup>9</sup> DRA recommends defining “low participation” consistent with the provision in D.11-03-007: “Participation will be considered low if, after six months, PacifiCorp has received applications that total less than one-quarter of the ...capacity for commercial...incentives in step 1.” See D.11-03-007 Appendix A, pp. 3-4.

<sup>10</sup> Joint Implementation Plan, p. 8.

diminish available funding for other multifamily/commercial solar water heating systems. This further suggests the need to start solar pool heating incentives at a more conservative level and allow stakeholders to observe program uptake before considering a higher incentive level.

**C. The PAs should design the pool incentive calculator to calculate savings as accurately as feasible.**

The Joint Implementation Plan recommends a number of assumptions for the calculator for solar pool heating incentives.<sup>11</sup> If performance based incentives (PBI) will not be required for solar pool heating systems, as also recommended by the PAs, it is critical that systems be modeled as accurately as possible so that limited incentive dollars will be paid for accurately estimated savings. In particular, DRA recommends against building in an assumption that all pools will have a cover. While pools that do not have a cover will likely require larger systems and thus use a bigger share of incentives than if they were covered, it is nevertheless important to model systems as accurately as possible so that the Commission and all stakeholders can best estimate the amount of therm savings from the CSI-Thermal program, consistent with the Commission's decision establishing this program.<sup>12</sup> Moreover, according to market participants in the solar pool heating industry, many pools are not covered for safety and operational reasons.

**III. CONCLUSION**

DRA respectfully recommends that the Commission direct the Program Administrators to revise their proposed implementation of the Solar Pool incentive program as described in these comments.

Respectfully submitted,

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<sup>11</sup> Joint Implementation Plan, pp. 9-10.

<sup>12</sup> Decision (D.)10-01-022 adopted Staff's recommendation to set the goal based on the displacement of natural gas equivalent to 200,000 systems, estimated at 585 million therms. See D.10-01-022, pp. 18-19.