Decision 12-08-008 August 2, 2012

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 10-05-004 (Filed May 6, 2010)

DECISION MODIFYING DECISION 10-01-022 TO ADJUST INCENTIVE STRUCTURE IN THE CALIFORNIA SOLAR INITIATIVE THERMAL PROGRAM

1. Summary

In Decision (D.) 10-01-022 the Commission established the California Solar Initiative (CSI) Thermal Program and adopted incentive levels in four steps. This decision modifies D.10-01-022 to provide increased incentives in the early steps of the program to both natural gas and electric displacing Solar Water Heating (SWH) systems, while retaining the goal of replacing the equivalent of 200,000 natural gas-fired water heating systems with SWH systems. Most significantly, the Step 1 incentive level for single-family residential customers will be increased by 45% and the Step 1 incentive level for commercial and multifamily residential customers will be increased by 13.33%. The remaining steps have been adjusted so that the total therms and kilowatt hours displaced over the course of the program remain the same. This increase in the incentive payment amounts early in the CSI Thermal Program is designed to boost early

participation in the program, thereby facilitating development of the SWH market.

2. Background

In Decision (D.) 10-01-022,[1] adopted on January 22, 2010, the Commission established the California Solar Initiative (CSI) Thermal Program, which pays incentives to Solar Water Heating (SWH) systems that displace natural gas, electricity or propane. The CSI Thermal Program Administrators[2] (PAs) pay the incentives to customers with qualifying projects. The incentives for natural gas-displacing systems are funded by $250 million collected from natural gas ratepayers, as contemplated by Assembly Bill (AB) 1470, the Solar Water Heating and Efficiency Act of 2007 (Stats. 2007 ch. 536). The incentives for electric-displacing systems are funded by $100.8 million collected from electric ratepayers and allocated for solar thermal incentives in the general market program budget of the CSI program.

The incentive budget for the natural gas-displacing portion of the program will continue until all the funds have been awarded or until December 31, 2017. The incentive budget for the electric-displacing portion of the program is available until the CSI general market program budget has been exhausted or January 1, 2017, whichever occurs first. A portion of the $250 million collected

[1] The petition proposes modification of D.10-01-022, adopted in Rulemaking (R.) 08-03-008. In May 2010 the Commission opened the successor rulemaking R.10-05-004 and directed that all modifications of prior decisions should occur in the new rulemaking docket (*See* R.10-05-004, Ordering Paragraph 3.)

[2] The CSI Thermal PAs are Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), Southern California Gas Company (SoCalGas), and the California Center for Sustainable Energy (CCSE) in the San Diego Gas & Electric Company (SDG&E) service territory.

from natural gas ratepayers is allocated to measurement and evaluation, market facilitation and program administration, leaving $205 million for payment of incentives ($180 million for general market and $25 million for the low-income incentive program). $7.5 million has been budgeted for market facilitation and program administration for electric-displacing systems, with an additional amount from the CSI budget for administration.

The incentive program divides the available funds between customer classes (i.e., single-family customers and commercial and multifamily customers), and between customers with electric-displacing and natural gas-displacing systems. The levels of incentives are structured, with the highest payments available to customers who participate early in the program. As more systems are installed, the incentive amount decreases.

On November 10, 2011, two decisions were issued modifying D.10-01-022: D.11-11-005 modified it to allow propane-displacing SWH systems to qualify for incentives and D.11-11-004 modified it to address issues related to certification standards. In addition, D.11-10-015, issued in October 2011, outlined the components for the low-income portion of the SWH incentive program.

Following the Commission's approval of the CSI Thermal Program in D.10-01-022 in January 2010, Energy Division worked with the PAs to develop the CSI Thermal Program Handbook, database, online application and incentive calculator. The program began accepting applications for single-family systems on May 1, 2010 and for multifamily and commercial systems on October 8, 2010. The decision also contemplated a statewide marketing campaign to promote the program. The marketing campaign kicked off in April 2012.

On January 30, 2012, California Solar Energy Industries Association (CALSEIA) filed a petition to modify D.10-01-022 (Petition) to adjust the incentive amounts and increase training for installers. CALSEIA cited the fact that to date there have been few single-family SWH systems installed and multifamily and commercial installations have also been sluggish. CALSEIA states that the petition was filed outside the one year window because CALSEIA waited two years after the start of the program to see if participation levels would increase.

3. Timeliness of Petition

D.10-01-022 was effective on January 21, 2010. Rule 16.4(d) of the Commission's Rules of Practice and Procedure requires petitions to be filed and served within one year of the effective date of the decision. If more than one year has elapsed, the petitioner must explain why the petition could not have been presented within one year. CALSEIA states that because the program was established in 2010, it was reasonable to wait to assess the success of the program before filing any petition to modify it. Therefore, CALSEIA requests that its petition be accepted despite the fact it is beyond the one year effective date of D.10-01-022. CALSEIA provides a reasonable explanation for filing its petition beyond the one year effective date of D.10-01-022. We will accept and consider CALSEIA's petition.

4. Proposal to Change Incentive Structure

4.1. CALSEIA's Petition

CALSEIA proposes increasing the current Step 1 incentive level by 100% for single-family customers and by 30% for multifamily and commercial customers.[3] Currently, both classes of customers receive the same incentive rate, but under CALSEIA's proposal single-family customers would receive a larger incentive rate than multifamily and commercial customers. The current step level for both classes of customers would be increased. To accomplish this increase within the program budget set in D.10-01-022, CALSEIA suggests that incentives in the later steps would be reduced. CALSEIA believes that this change will increase SWH adoption in the near term and thereby increase overall participation in the program.

According to CALSEIA, the California Energy Commission (CEC) took a similar approach when implementing the Emerging Renewables Buydown Program (ERBP). ERBP participation was initially slower than anticipated. In 2001, the CEC increased incentives by 50% -- from $3.00 to $4.50 per Watt. According to CALSEIA's review of CEC data, the number of system installations in calendar year 2001 increased 462% and the number of system installations continued to increase each year through 2004. (Petition at 3-4). CALSEIA believes that increasing incentives for early SWH adopters would produce a similar customer response.

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[3] CALSEIA describes the customer classes as "residential" and "commercial." To be consistent with the existing incentive structure, we have used the customer class definitions in D.10-01-022: (1) single-family residential, and (2) multifamily residential and commercial.

CALSEIA bases its proposed 100% increase in the Step 1 incentive rate for single-family on the fact participating contractors have stated to CALSEIA that "current incentives are the main obstacle to customer willingness to participate." (Petition at 6.) The incentive is part of the financial value proposition outlined to potential customers during the sales presentation. (*Id*.)

Similarly, CALSEIA bases its proposed 30% increase in the Step 1 incentive rate for multifamily and commercial customers on the fact that participating contractors have stated that multifamily and commercial customers are "less impacted by the current incentive structure" than single-family customers, so a comparatively smaller increase of 30% should still result in a boost in participation. (*Id*.)

CALSEIA proposes no changes to the low-income SWH component of the program because this component is so new. The Commission issued D.11-10-015, outlining the components of the low-income SWH program, in October 2011. In compliance with that order, the PAs filed their advice letter amending the CSI Thermal Program Handbook to incorporate the low-income SWH component in January 2012. Energy Division staff approved the advice letter in March 2012. The CSI Thermal Low-Income Program began accepting applications on March 29, 2012.

4.2. Parties' Comments

The four CSI Thermal PAs filed a joint response to CALSEIA's petition and the Commission's Division of Ratepayer Advocates (DRA) filed a separate response.

The PAs support increasing the Step 1 rate for single-family customers, but clarify that, because there is no information supporting the amount of the requested increase, the PAs take no position on the size of the proposed increase.

The PAs envision a modified incentive structure where Step 1 is split into two steps to avoid a sharp drop between the Step 1 rate and the Step 2 rate. The PAs also suggest that the program goals will need to be restructured, and that an increase in low-income incentive rates should be considered.

The PAs do not support an increase for multifamily and commercial at this time.

The PAs also state that changes to the incentive rates should not be made until after marketing and outreach plans are fully implemented and the success of statewide marketing initiative can be evaluated. The marketing and outreach plan launched in April 2012.

In contrast, DRA raises some of the same concerns about cost-effectiveness that it raised in the original proceeding. DRA recommends reviewing the cost-effectiveness of the SWH Incentive Program before considering any revisions to the structure of the incentive program. For example, DRA states that a different cost-effectiveness methodology should have been used initially, and that there were flaws in the cost-effectiveness studies prepared by Itron, Inc. (DRA Response at 2.) DRA also states that the assumptions and estimates used in the original evaluation should be updated. Notably, the original analysis used 2008 data on retail gas prices and projections to calculate avoided energy costs and DRA asserts that using current prices and forecasts would yield different results. (*Id*. at 4.) In addition, DRA notes that the cost-effectiveness analysis relied on achieving a 16% reduction in system cost. This amount was calculated based on bringing $6,500 system cost down to $5,450 by 2017. According to DRA, however, the average system cost reported is significantly higher than $6,500 ($8,197 for single-family natural gas-displacing systems and $7,388 single-family electric-displacing systems). Therefore, it is unlikely that the

$5,450 price goal would be reached by 2017. Finally, DRA points out that there is no information on how additional incentives will transform the SWH market.

CALSEIA filed reply comments reiterating that, although it is impossible to predict the exact outcome of the proposed increase in incentives for early adopters, a similar change made by the CEC to ERBP led to an increase in adoption rates which in turn enhanced development of the distributed photovoltaic market. In addition, contractors have told CALSEIA that customers who are interested in SWH systems would be more likely to purchase a SWH system if there was an increased incentive amount.

CALSEIA also pointed out that the Commission made its findings and conclusions regarding the cost-effectiveness of the program in D.10-01-022, and there is no provision requiring the Commission to revisit that analysis. (CALSEIA Reply Comments at 5.)

5. Discussion of Revised Incentive Structure

As CALSEIA points out, in its first two years the CSI Thermal Program has fallen far short of the goals envisioned in D.10-01-022 and in the statute.[4] To achieve the goals of the CSI Thermal Program, we agree with CALSEIA that D.10-01-022 must be modified to adjust the incentive structure for residential and commercial customers. This decision adopts a new incentive structure similar to that proposed by CALSEIA. The revised incentive structure for natural gas-displacing systems is set forth in Table 1.

[4] According to the data available on the Go Solar website as of May 30, 2012 for both gas and electric-displacing systems, less than 5% of target displacement has been reached. See downloadable Excel file at (http://www.gosolarcalifornia.com/solarwater/index.php).

The CSI Thermal Program's purpose is to increase the size of the SWH market by encouraging adoption of SWH technologies, support reductions in the cost of SWH systems by increasing market size, increase consumer confidence and understanding of SWH technology, and reduce market barriers to SWH adoption. The original incentive structure considered how system costs influence adoption rates. However, participation in the CSI Thermal Program has been lower than anticipated in D.10-12-022. In particular, program participation by single-family customers has lagged. Multifamily and commercial customers have also been slow to participate. By increasing incentives early in the program, we will increase interest in the program, which should result in higher adoption rates in the near future. We expect the program to maintain and build on this early momentum.

5.1. The Revised Incentive Structure

Under the incentive structure adopted in this decision, there will be separate rates for the two classes of customers: rates for single-family homes will be increased by 45% (from $12.82 to $18.59) at the Step 1 incentive level, and by 27.78% (from $10.26 to $13.11) at the Step 2 incentive level. To accommodate this change, there will be adjustments in the amount of incentive funds available in each step and between the two customer classes. Incentive rates for Step 4 are reduced by approximately one-third compared to the original incentive structure. The maximum incentive per single-family installation remains capped at 125% of the average single-family incentive.

For multifamily and commercial customers, rates will be increased by 13.33% at the Step 1 incentive level. As with single-family rates, the rate for Step 4 will be decreased by approximately one-third compared to the original incentive structure. The maximum incentive per multifamily or commercial installation remains capped at $500,000.

These changes do not change the total incentive budget, which remains at $180 million of gas-displacing systems. The table below shows the new incentive levels and the budget allocation for each step.

Table 1: Revised CSI Thermal Gas Displacing Incentive Structure

Step	Customer Class	Incentive per therm displaced	Budget Allocation	Annual Therms Displaced (in thousands of therms)	Equivalent Single-Family Residential Systems[5]
1	Single-Family Commercial/Multifamily	$18.59 $14.53	$29,000,000 $34,000,000	1,560 2,340	13,334 20,000
	Subtotal		**$63,000,000**	**3,900**	**33,334**
2	Single-Family Commercial/Multifamily	$13.11 $9.88	$23,000,000 $26,000,000	1,755 2,632	14,992 22,493
	Subtotal		**$49,000,000**	**4,387**	**37,485**
3	Single-Family Commercial/Multifamily	$7.69 $6.55	$18,000,000 $23,000,000	2,340 3,510	20,000 30,007
	Subtotal		**$41,000,000**	**5,850**	**50,007**
4	Single-Family Commercial/Multifamily	$3.23 $3.13	$11,000,000	3,404 5,106	29,094 43,647

[5] The annual therm displacement in each step is converted to an equivalent number of single-family residential SWH systems based on the assumption an average residential system displaces 117 therms per year.

			$16,000,000		
	Subtotal		**$27,000,000**	**8,510**	**72,741**
	Total		**$180,000,000**	**22,647**	**193,567**

5.2. Determination of Revised Incentive Amounts

Although we agree with CALSEIA that there should be a restructured incentive program with greater incentives early in the program, we do not agree with the amount of the increases proposed by CALSEIA.

It is clear that increasing incentives will encourage participation in the program. The success of the EBRP program, which implemented an incentive increase early in the program, supports the idea that increasing incentives in the CSI Thermal program will increase participation. However, CALSEIA did not propose any bases or evidence supporting its proposed increase amounts. The PAs support an increase for single-family customers, but they declined to endorse a specific increase amount.

In light of this, it is reasonable to base the new incentive structure on the goals, strategy and program design principles set forth in D.10-12-022. These considerations include the importance of participation by single-family customers, the need to smooth the transition between incentive level steps, the need to reach the statutory goal of 200,000 systems installed, budgetary limits and the need to have consistent incentive structures for natural gas-displacing and for electric-displacing systems.

The revised incentive structure stays within the statutorily mandated parameters of the program. The incentive structure retains many of the original features of the program, will achieve the same system equivalent thermal

displacement goal, and adhere to the same budget. As required by AB 1470, the goal for natural gas-displacing systems continues to be 585 million therms (the equivalent of 200,000 single-family systems over the 25-year life of the systems).

With the marketing campaign launching in April 2012, it is important to maximize market stability by staying close to the original incentive structure. The revised incentive structure provides for the same total amount to be available for incentives ($180 million for gas-displacing systems, not including incentives for low-income customers, and $100.8 million for electric-displacing systems). The number of program step levels and customer classes also remains the same: four step levels, for each of two customer classes (single-family and multifamily and commercial).

Table 2: Comparison of Original Incentive Structure and Revised Incentive Structure

Step	Original Incentive Funding Amount	Revised Incentive Funding Amount	Original Incentive per Therm Displaced	Revised Incentive per Therm Displaced
1	$50,000,000	$63,000,000	$12.82	$18.59 (Single-Family) $14.53 (Multifamily/Commercial)
2	$45,000,000	$49,000,000	$10.26	$13.11 (Single-Family) $9.88(Multifamily/Commercial)
3	$45,000,000	$41,000,000	$7.69	$7.69 (Single-Family) $6.55(Multifamily/Commercial)
4	$40,000,000	$27,000,000	$4.70	$3.23 (Single-Family) $3.13(Multifamily/Commercial)
Total	$180,000,000	$180,000,000		

In keeping with CALSEIA's proposal, and the rationale set forth in D.10-12-022, we have shifted incentive funds from the later steps to earlier steps – increasing the amount of incentive funds available for both Step 1 (for all customer classes) and Step 2 (for single-family customers). Increasing the

incentives at these step levels should result in higher adoption rates in the near future.

Table 3: Comparison of Projected Average Incentive Amounts for Single-Family Residential Customers

Step	Original Incentive per Therm Displaced	Revised Incentive per Therm Displaced	Original Incentive for Average Residential SWH System[6]	Revised Incentive for Average Residential SWH System
1	$12.82	$18.59	$1,500	$2,175
2	$10.26	$13.11	$1,200	$1,535
3	$7.69	$7.69	$900	$900
4	$4.70	$3.23	$550	$380

In addition to shifting funds to the early steps of the program, the new incentive structure will increase funds available to single-family customers by changing the allocation of funds between customer classes.

Single-family homes are an important part of the program. Indeed, one important benchmark for measuring program goals is based on displacing natural-gas water heating systems equivalent to 200,000 single-family home systems. As Environment California stated in its comments in R.08-03-008, residential customers will contribute substantially to the program and this market represents tremendous opportunity for market penetration and renewable energy investment. (D.10-01-022 at 34.)

Program participation by single-family customers has been slower than participation by multifamily and commercial customers. A residential customer installing a SWH system does not benefit from the same economies of scale as a multifamily or commercial customer.

[6] Assumes average residential system displaces 117 therms per year.

By shifting funds from the multifamily and commercial budget to the single-family budget, we will be able to increase incentives for single-family homes thereby supporting this key aspect of the CSI Thermal Program. This, in turn, should increase the number of consumers with confidence and an understanding of the SWH technology, furthering the goal of market transformation. Based on this, it is reasonable to allocate more funds to single-family systems.

Table 4: Allocation of Incentive Budget Between Customer Classes

Customer Group	Original Allocation	Revised Allocation
Single-family	40%	45%
Multifamily/commercial	60%	55%

It is also reasonable to provide larger incentives for single-family customers. The new incentive structure provides that, at each incentive step level, the per-therm or per-kilowatt hour incentive rate for single-family customers is higher than the corresponding incentive rate for multifamily and commercial customers.

For each customer class and step level, the number of therms displaced should remain the same. For example, the total number of therms to be displaced by single-family SWH systems in Step 1 is the same under the original incentive structure and the revised incentive structure.

Table 5 shows the therms that will be displaced annually and the equivalent number of single-family home systems by step level. The step levels and goals for displacement are the same in both the original and the revised incentive structure.

Table 5: Gas-Displacing Incentives by Customer Class for both the Original and the Revised Incentive Structures[7]

Step	Customer Class	Annual Therms Displaced (Same for original and revised structure)	Equivalent Single-Family Systems (Same for original and revised structure)
1	Single-Family	1,560,000	13,334
	Commercial/multifamily	2,340,000	20,000
	Subtotal	3,900,000	33,334
2	Single-Family	1,755,000	14,992
	Commercial/multifamily	2,632,000	22,493
	Subtotal	4,387,000	37,485
3	Single-Family	2,340,000	20,000
	Commercial/multifamily	3,510,000	30,007
	Subtotal	5,850,000	50,007
4	Single-Family	3,404,000	29,094
	Commercial/multifamily	5,106,000	43,647
	Subtotal	8,510,000	72,741
	Total	22,647,000	193,567

The decline between step levels should be minimized to create market clarity and stability. Incentive declines are triggered based on the incentives committed for a customer class. (D.10-01-022 Appendix A at 6.) Abrupt changes in incentive amounts could cause disruption in the market. For example, a dramatic difference in incentives will discourage customers looking to invest in SWH when installations are nearing a capacity reservation trigger for an

[7] The number of annual therms displaced for the Step 1 incentive level will be slightly higher than the numbers shown here because of program commitments made for SWH systems prior to this Decision.

incentive decline. By smoothing the decline between steps, we will minimize the risk of disruption. Although the new incentive structure for both single-family and multifamily and commercial customers will result in steeper declines between steps, the declines are still reasonable.

For single-family customers under the restructured incentive program, the decreases between steps will be relatively consistent (averaging $4.65 between steps). However, the decrease from Step 1 to Step 2, and from Step 2 to Step 3, will be over $5.00, compared to under $3.00 in the previous incentive structure.

For multifamily and commercial customers, under the restructured incentive program, the decreases between the steps will be relatively consistent equal (averaging $3.63), but the decrease from Step 1 to Step 2 will be more than $1.00 greater than under the previous incentive structure.

Other than these changes, the incentive structure will remain the same, including the proportion of funds allocated to each service territory.

5.3. Incentive Structure for Electric-Displacing Systems

In keeping with our conclusion in D.10-01-022, the incentive structure for electric-displacing systems parallels the above structure for gas-displacing systems. Although the incentive rates differ, the step levels will decline in the same manner and at the same time as the steps for natural gas-displacing systems.

Table 6: Electric-Displacing Incentive Structure from D.10-01-022

Step Level	Electric-Displacing Incentive ($/kWh)	Incentive for Average Residential System
1	0.37	$1010
2	0.30	$820
3	0.22	$600
4	0.14	$380

Table 7: Revised Electric-Displacing Incentive Structure

Step	Customer Class	Electric-Displacing Incentive ($/kWh)	Incentive for Average Residential System
1	Single-Family	0.54	$1,467.33
1	Multifamily Commercial	0.42	N/A
2	Single-Family	0.38	$1,048.42
2	Multifamily Commercial	0.29	N/A
3	Single-Family	0.22	$601.70
3	Multifamily Commercial	0.19	N/A
4	Single-Family	0.10	$263.24
4	Multifamily Commercial	0.09	N/A

5.4. Effective Date

The potential for a change in incentive amounts will cause uncertainty in the market. Once the proposed decision has been issued, the SWH market will be aware of the potential for greater incentives. Therefore, it is reasonable to allow the incentive changes to apply to all CSI Thermal Program applications received after the date the proposed decision is issued, if the Commission adopts these higher incentives. The decision will apply to applications submitted after the date the proposed decision is issued for comment. The PAs suggest that we should wait until after the marketing and outreach plan has been implemented and evaluated before implementing any incentive changes. We disagree. First, as indicated above, knowledge of the potential for higher incentives will cause uncertainty in the market. Second, given the relatively short remaining life of the program, it is essential to make changes to the incentive structure without delay.

For purposes of this determination, an application shall be considered submitted on the initial "Application Review" status date. For multifamily and commercial applications, the "Application Review" status date is the date by which both the Reservation Request Forms and the Incentive Claims Forms have been submitted. If a system is eligible for the adjusted incentive amount, but the incentive has already been paid out, the PA will issue an incremental payment to the system owner.

5.5. Cost Effectiveness Analysis Already Resolved

In determining how best to restructure the incentives, it is not necessary to revisit the cost-effectiveness analysis. Neither AB 1470 nor D.10-01-022 requires us to revisit the cost-effectiveness analysis prior to making a change to the incentive structure. To revisit the cost-effectiveness analysis now would require months of additional proceedings resulting in a delay in restructuring the incentive program. With only five years left before the program ends in December 2017, any delay would be untenable. In addition, a delay now that the program has already been implemented would create a cloud of uncertainty around incentive amounts. Finally, although projections and assumptions made today would be different from those made originally, these new projections would be subject to the same level of uncertainty.

5.6. Low-Income Program

The incentive rates for low-income customers will remain the same. In D.11-10-015, the incentive rates for qualifying single-family low-income customers were set at 200% of the applicable general program incentive level, and the incentives for qualifying multifamily affordable housing customers were set at 150% of the applicable general program incentive levels set forth in D.10-01-022. As shown in Table 8 below, the low-income incentive levels will

continue to be based on the incentive levels established for the general program in D.10-01-022. The PAs proposed changing the low-income program. We disagree. Because this program is comparatively small, and began operations only a few months ago, it is not reasonable to make changes to this portion of the incentive program at this time.

Table 8: SWH Incentive Levels for Single-Family and Multifamily Low-Income Applicants

Step	Single-Family Low-income Incentive per therm displaced	Incentive for average Low-Income system	Multifamily Low-Income Incentive per therm displaced
1	$25.64	$3,000	$19.23
2	$20.52	$2,400	$15.39
3	$15.38	$1,800	$11.53
4	$9.40	$1,100	$7.05

6. Proposal to Increase Training Budget

In its petition and reply, CALSEIA asserts that a substantial increase in SWH system sales will require additional training for installers. (Petition at 7.) CALSEIA expresses concern that without additional training it will be difficult to maintain the high level of customer satisfaction necessary to achieve the goal of increasing the size of SWH market in California.

The PAs contend that expanding contractor training requirements at this time is premature. They assert that the current training program is sufficient, and warn that adding unnecessary training requirements could become a barrier to program participation. The PAs believe that any problems with contractor installations can be handled through the PAs monthly working group meetings.

DRA did not comment directly on training, but its comments indicate that no changes should be made to any part of the CSI Thermal Program at this time.

We agree that at this time there is no reason to expand the training program. First, CALSEIA has not provided any data to suggest that the current level of training is insufficient. Second, with so many different SWH products on the market, and with more technologies likely to become eligible under the program in the near future, it does not make sense for the program itself to be responsible for funding all training. Rather, the manufacturers and marketers of specific technologies should develop any necessary additional training. The existing training program will remain in place, and is funded through the Marketing Facilitation portion of the program budget which is updated annually through an advice letter process.

For these reasons, we will not modify D.10-01-022 to expand or otherwise change the installer training program at this time.

7. Comments on Proposed Decision

The proposed decision of the Commissioner in this matter was mailed to the parties in accordance with Section 311 of the Public Utilities Code and comments were allowed under Rule 14.3 of the Commission's Rules of Practice and Procedure. Comments were filed on July 23, 2012, by DRA, the PAs, and CALSEIA. No reply comments were filed.

Where the comments suggested minor adjustments or clarifications to the decision, these changes have been incorporated throughout the decision. Where comments reargued earlier positions or attempted to present new arguments or facts, they were not considered.

CALSEIA and DRA both asked for changes to the proposed adjustments to the incentive structure. CALSEIA and the PAs asked for an expedited process for future adjustments to the incentive structure. None of these proposals is supported by compelling arguments. Future changes to the incentive structure can be made based on recommendation by the Energy Division, or petition of one of the parties, subject to the same public comment and review as other decision modifications.

The PAs recommend that in addition to adjusting the incentive amounts, the single-family incentive caps be adjusted by the same percentage adjustment as the incentive rates. This change is not necessary because the cap is already set at a percentage of the average single-family incentive, so the cap automatically increases (and decreases) to reflect the new incentive amounts.

8. Assignment of Proceeding

Michael R. Peevey is the assigned Commissioner and Dorothy J. Duda is the assigned ALJ in this proceeding.

Findings of Fact

1. AB 1470 authorized the creation of a $250 million incentive program to promote the installation of solar water heating systems in homes and businesses to displace natural gas usage by 2017.

2. Section 2851(b) of the Public Utilities Code allowed the Commission to allocate $100.8 million of CSI funds to incentives for solar thermal technologies such as solar water heating.

3. D.10-01-022 adopted the CSI Thermal Program as contemplated by AB 1470 and the Public Utilities Code.

4. The CSI Thermal Program established in D.10-01-022 is intended to provide incentives to promote the installation of solar water heating systems and to develop water heating alternatives in California.

5. The program's goals include (a) installing natural gas-displacing SWH systems sufficient to displace use of 585 million therms of natural gas (equivalent to 200,000 single-family systems over the 25-year life of the systems); and (b) installing electric-displacing SWH systems sufficient to displace use of 275.7 million kWh per year (equivalent to 100,800 single-family systems).

6. In 2010, the program began taking applications for single-family, multifamily and commercial SWH systems.

7. CALSEIA did not file its petition within one year of the effective date of D.10-01-022 because CALSEIA believed it was reasonable to wait until there had been sufficient time to evaluate the success of the CSI Thermal Program.

8. The current incentive structure has not provided adequate incentives to promote SWH system installations at a rate sufficient to meet the goals of the program.

9. There is insufficient data to project the exact relationship between incentives and future adoption rates.

10. The CEC successfully addressed a similarly low early adoption rate in the ERBP by increasing incentive amounts.

11. Contractors have told CALSEIA that increased incentive amounts could lead to increased adoption.

12. A cost-effectiveness analysis was performed as part of D.10-01-022 and there is no requirement to perform a new cost-effectiveness analysis.

13. The proposed changes in allocation of incentive funds will increase funds available early in the program, and should boost adoption rates of SWH systems.

14. Single-family residential systems are an essential part of the SWH system incentive program.

15. During the first two years of the program, single-family residential customers did not install SWH systems on pace with the goals set forth in D.10-01-022.

16. The proposed changes to the program will not change the overall budget allocation or the total goal for therm and kWh displacement.

17. There is no indication in this proceeding that the current training program is insufficient.

18. Sufficient funds have been allocated for training in the market facilitation portion of the program budget. The budget is updated annually by advice letter.

19. The marketing campaign launched in April 2012.

Conclusions of Law

1. Because multifamily and commercial installations have greater economies of scale than single-family installations, it is reasonable to provide a higher per kWh and per therm incentive amount to single-family customers.

2. Performing a new cost-effectiveness analysis would delay implementation of necessary changes to the incentive program and create uncertainty in the SWH market.

3. The incentive structure adopted in D.10-01-022 should be modified to encourage adoption of SWH systems at the Step 1 incentive level and to promote the statutory goals of the program, including displacing therms equivalent to 200,000 single-family systems.

4. It is reasonable to use the same incentive step structure to allocate incentives for both natural gas and electric-displacing systems.

5. The program currently provides sufficient training for contractors who wish to participate in the program.

6. The low-income component of the program should not be modified at this time.

7. The new gas-displacing incentive levels set forth in this decision are reasonable and should be adopted.

8. The new electric-displacing incentive levels set forth in this decision are reasonable and should be adopted.

9. We should allocate 45% of the gas-displacing incentive budget to single-family customers, and 55% to commercial and multifamily customers.

10. D.10-01-022 should be modified to adopt the new incentive structure.

11. To reduce disruption in the SWH market, any applications submitted after the date the Proposed Decision mails for comment should be eligible for incentives through CSI Thermal Program if they meet all other program eligibility criteria

12. CALSEIA's petition should be considered although it was filed more than a year after the Commission issued D.10-01-022.

O R D E R

IT IS ORDERED that:

1. Decision 10-01-022 establishing the California Solar Initiative Thermal Program is modified as set forth in Appendix A of this decision.

2. Within 30 days of the effective date of this order, the California Solar Initiative (CSI) Thermal Program Administrators (namely, Pacific Gas and Electric Company, Southern California Edison Company, Southern California

Gas Company, and the California Center for Sustainable Energy) shall jointly file a Tier 2 advice letter to modify the CSI Thermal Program Handbook incorporating the changes in this decision and summarized in Appendix A.

3. Upon approval of the revisions to the California Solar Initiative (CSI) Thermal Program Handbook, the CSI Thermal Program Administrators (namely, Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company, and the California Center for Sustainable Energy) shall apply the new incentive structure to all applications with an "Application Review" status date after the date the proposed decision mailed for comment (July 3, 2012). For multifamily and commercial applications, the "Application Review" status date is the date by which both the Reservation Request Forms and the Incentive Claims Forms have been submitted.

4. This proceeding remains open for consideration of additional issues as set forth in the Scoping Memo Ruling of November 9, 2010.

5. Rulemaking 10-05-004 remains open.

This order is effective today.

Dated August 2, 2012, at San Francisco, California.

MICHAEL R. PEEVEY
President
TIMOTHY ALAN SIMON
MICHEL PETER FLORIO
CATHERINE J.K. SANDOVAL
MARK J. FERRON
Commissioners

APPENDIX A

Modifications to Appendix A of Decision (D.) 10-01-022

Table 1 of Appendix A of D.10-01-022 should be replaced with the following:

Table 1: Adopted CSI Thermal Gas Displacing Incentive Structure

Step	Customer Class	Incentive for Average Single-Family SWH System	Funding Amount	Incentive per Therm Displaced	Therms Displaced Over System Life[1]
1	Single-family	$2,175.00	$29,000,000	$18.59	39,000,000
1	Multifamily/ Commercial	N/A	$34,000,000	$14.53	58,500,000
1	**Subtotal**		**$63,000,000**		**97,500,000**
2	Single-family	$1,533.33	$23,000,000	$13.11	43,875,000
2	Multifamily/ Commercial	N/A	$26,000,000	$9.88	65,800,000
2	**Subtotal**		**$49,000,000**		**109,675,000**
3	Single-family	$900.00	$18,000,000	$7.69	58,500,000
3	Multifamily/ Commercial	N/A	$23,000,000	$6.55	87,750,000
3	**Subtotal**		**$41,000,000**		**146,250,000**
4	Single-family	$378.08	$11,000,000	$3.23	85,100,000
4	Multifamily/ Commercial	N/A	$16,000,000	$3.13	127,650,000
4	**Subtotal**		**$27,000,000**		**212,750,000**
		Total	**$360,000,000.00**		**566,175,000**[2]

[1] This analysis assumes a 25-year system life.

[2] The 566.1 million in total therms displaced is 97% of the 585 million program goal in the Staff Proposal. Additional therms will be displaced by the low income SWH incentive program.

The fifth paragraph after Table 1 of Appendix A of D.10-01-022 should be replaced with the following:

Incentive dollars will be allocated between single-family residential and commercial and multifamily customers as follows:

· 45% of the total incentive budget is reserved for single-family residential customer SWH systems.

· 55% of funds may be used for incentives to commercial or multifamily SWH systems.

Table 2 of Appendix A of D.10-01-022 should be replaced with the following:

Table 2: Gas Displacing Incentive Structure by Customer Class

Step	Customer Class	Incentive per therm displaced	Budget Allocation	Annual Therms Displaced (in thousands of therms)	Equivalent Single-Family Residential Systems[3]
1	Single-Family Commercial/Multifamily	$18.59 $14.53	$29,000,000 $34,000,000	1,560 2,340	13,334 20,000
	Subtotal		**$63,000,000**	**3,900**	**33,334**
2	Single-Family Commercial/Multifamily	$13.11 $9.88	$23,000,000 $26,000,000	1,755 2,632	14,992 22,493
	Subtotal		**$49,000,000**	**4,387**	**37,485**
3	Single-Family Commercial/Multifamily	$7.69 $6.55	$18,000,000 $23,000,000	2,340 3,510	20,000 30,007
	Subtotal		**$41,000,000**	**5,850**	**50,007**
4	Single-Family Commercial/Multifamily	$3.23 $3.13	$11,000,000 $16,000,000	3,404 5,106	29,094 43,647

[3] The annual therm displacement in each step is converted to an equivalent number of single-family residential SWH systems based on the assumption an average residential system displaces 117 therms per year.

	Subtotal		**$27,000,000**	**8,510**	**72,741**
	Total		**$180,000,000**	**22,647**	**193,567**

Table 3 of Appendix A of D.10-01-022 should be replaced with the following:

Table 3: Electric Displacing Incentive Structure

Step Level	**Electric Displacing Incentive ($/kWh)**	**Incentive for Average Residential System**
1 Single-family	0.54	$1,467.33
1 Multifamily Commercial	0.42	N/A
2 Single-family	0.38	$1,048.42
2 Multifamily Commercial	0.29	N/A
3 Single-family	0.22	$601.70
3 Multifamily Commercial	0.19	N/A
4 Single-family	0.10	$263.24
4 Multifamily Commercial	0.09	N/A

(END OF APPENDIX A)