



**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

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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)

**REPLY COMMENTS OF UTC POWER CORPORATION ON  
PROPOSED DECISION REGARDING MODIFICATIONS TO  
THE SELF-GENERATION INCENTIVE PROGRAM**

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Dated: August 15, 2011

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**REPLY COMMENTS OF UTC POWER CORPORATION ON  
PROPOSED DECISION MODIFYING THE SELF-GENERATION INCENTIVE PROGRAM  
AND IMPLEMENTING SENATE BILL 412**

**I. Introduction**

UTC Power Corporation (“UTCP”), a subsidiary of United Technologies Corporation (“UTC”), appreciates the opportunity to provide reply comments on the proposed decision (“PD”) generated by Commissioner Peevey of the California Public Utilities Commission (“Commission”) to modify the Self-Generation Incentive Program (“SGIP”) and implement Senate Bill 412.

The State of California is one of the most important markets for UTCP’s fuel cell products, including not only the PureCell® Model 400 combined heat and power system but also the PureMotion® System Model 120 fuel cell powerplant for hybrid-electric transit buses. California is also home to almost 5,000 UTC employees in 35 locations, including Clipper Windpower, a supplier of utility-scale wind turbines based in Carpinteria, and Pratt & Whitney Rocketdyne of Canoga Park, which is developing concentrating solar power technology. A diverse portfolio of energy solutions is a strength to us, as well as to the State of California as it implements greenhouse gas (GHG) reduction measures. Multiple approaches are necessary to achieve California’s environmental policy with regard to the generation of electricity, and the SGIP is one that remains vital to ratepayers, employers, citizens, and government in California.

We appreciate the tremendous amount of work and coordination that has brought us to the PD. While UTCP accepts the proposed approach to performance-based incentives, incentive declines, tiered incentive rates, metering and application fees, we would like to address certain areas that could either support or undermine the SGIP’s success and meeting California’s environmental and energy policy for the generation of electrical and thermal energy.

## **II. Comments**

### **a. SGIP Purpose and Guiding Principles – Market Transformation**

Achieving market transformation for clean, efficient generation of energy faces the challenge of stimulating the market, while balancing support for a variety of technologies. Regrettably, the available funding under the SGIP and its limited time horizon are at odds with the purpose of market transformation, as opening comments observed (FuelCell Energy, p.1; PG&E, p. 3). The California Solar Initiative (CSI) also has the same goal, but is a 10-year, \$3 billion program for a single technology, compared to the SGIP's currently one year, \$83 million program for 11 technologies. This vast disparity suggests the SGIP needs to be extended and funded at significantly higher levels to be effective in introducing new technologies to the California energy mix while meeting GHG reduction goals.

We disagree with opening comments that downplay fuel cells and emerging technologies as not capable of market transformation, including a purported fuel cell cost of \$10,000 to \$12,000/kW, while failing to acknowledge other examples of far less expensive fuel cell projects (CLECA, p. 3). Phosphoric acid and molten carbonate fuel cells, for example, show a clear decline in project cost per kilowatt since the SGIP began, according to SGIP data. Some suggest the Commission abandon market transformation at this juncture for emerging technologies perceived to have limited potential (Div. of Ratepayer Advocates, p. 5). UTC Power is steadily reducing the capital cost of its second generation stationary power product, due in part to California installations under the SGIP. UTCP is also increasing the life of the product, reducing its lifecycle cost, with a stack life of 80,000 hours and a 20-year system design life. Losing focus on market transformation would negate the past success of SGIP projects moving California toward its economic and environmental goals.

The Commission and others express concerns that the program will be fully subscribed shortly after new rules are put in place and the suspension is lifted. UTCP would emphasize that this will not mean incentive levels are too low or that insufficient rules and restrictions are in place. At the anticipated time of program reinstatement, there will be close to one year of pent-up demand for all distributed energy resource technologies in the SGIP. The first year of the new

program is expected to be an exception in the volume of near-term applications due to the one year suspension – program success should realistically be measured beyond the next year.

#### **b. Budget Allocation**

Different approaches to the budget allocations would better reflect the intent of the SGIP. Our fundamental issue is the budget division among three technology categories. The 25% of the budget designated for Conventional CHP, for example, translates to about 50% of the total annual program megawatts, which seems profoundly out of balance. It is more logical to allocate the budget based on a specific distribution of installed capacity among the categories. PG&E raises similar concerns with the proposed allocation, and recommends the Commission consider the megawatt allocations to define budget allocation amounts (PG&E, p. 10). If the PUC retained the proposed percentages across the categories, but applied them to total potential installed capacity, the distribution of funding would be 48% for Renewables, 10% for Conventional CHP, and 42% for Emerging Technologies. Additionally, we recommend combining budgets for Renewable and Emerging Technologies, in part to simplify administration but also to remove a barrier that would artificially cap Emerging Technologies, reducing customer choice. FuelCell Energy supports the same (FCE, p. 3). The automatic transfer of funds from one category to another should also be implemented to support technologies with the greatest market demand.

#### **c. Supplier Concentration**

While there is no calculable answer to the appropriate level for a supplier cap, 50% should be a minimum. Any lower and the program once again risks picking winners and interfering with markets. Again, the PUC must find the balance between allowing the market to decide and ensuring funding is available for disparate technologies. The most detrimental outcome would be another program suspension.

#### **d. Eligibility of CHP Technologies Consuming Fossil Fuel**

UTC Power is confident the PAs can modify the waste heat utilization worksheet so projects can be efficiently evaluated individually without imposing undue administrative costs. However, no decisions have been made on how project-specific evaluation would be

performed. Any approach to force CHP projects to be sized to the host's minimum thermal load, as proposed by Southern California Edison (SCE, p. 5), is an overly conservative strategy, and many viable CHP projects could be rejected unnecessarily. The specific approach to an initial GHG screen should be developed in discussions among the PA's and CHP suppliers.

#### **e. Certification**

The PD introduced an SGIP eligibility requirement for electric-only technologies using natural gas to be certified by the California Air Resources Board to be GHG-reducing under realistic field conditions in the first five years of operation (PD, p. 16). Bloom Energy's opening comments (p. 4) suggested that this requirement be extended to all fossil fuel technologies. Such an expansion is not justified because the eligible CHP technologies can be determined capable of GHG reductions *a priori* based on electrical efficiency and the amount of useful thermal output available (total system efficiency). The specific manner in which a CHP system will be operated at a particular site will determine whether GHG reductions will be achieved. Consequently, project-specific evaluation is the only appropriate approach. The total efficiency of electric-only technologies, on the other hand, is inherently limited, so it is advisable to certify their eligibility beforehand to avoid consuming additional resources unnecessarily.

#### **f. Emerging Technologies**

UTC Power understands the benefits offered by advanced energy storage, and we would hope to incorporate such technology in fuel cell projects where it makes sense. However, myriad unanswered questions remain with respect to implementing the SGIP for standalone energy storage. Opening comments propose a host of changes and exceptions unique to this technology (CESA, pp. 3-13; Primus Power, pp. 2-10), underlining a forced fit with the SGIP, which centers on energy generation. In addition, different forms of energy storage have been available for decades. If standalone energy storage is to remain, the "advanced" nature of eligible energy storage needs further definition and, perhaps, technology specific eligibility screening. At the same time, purveyors of this technology are a party to the state's ongoing demand response applications proceeding, with implementation likely in the near future. We concur with Southern California Edison and PG&E that this technology is much better dealt

with outside of the SGIP (SCE, pp. 6-9; PG&E, pp.5-7). SCE also sensibly suggests that advanced energy storage coupled with solar PV should be handled under the CSI (SCE, p. 9).

#### **g. Directed Biogas**

The on-site biogas incentive was initially put in place to help offset the added capital cost involved in designing, purchasing and installing a cleanup skid to produce a natural gas-rich renewable fuel of adequate quality to be introduced into a fuel cell or other DER. Any customer using directed biogas, however, does not incur that capital cost – a directed biogas project and natural gas project are physically identical. Therefore, an applicant should not receive an additional up-front capital incentive just for using directed biogas. Any directed biogas incentive should be paid out with the PBI as an operational cost.

It is reasonable to also consider whether an applicant should receive any incentive from the SGIP to subsidize the presumably higher price of directed biogas fuel. Purchasers of green power are willing to pay more because they value the clean energy attributes, even though there isn't a financial payback. As many DER customers stated in opening comments, they have aggressive corporate sustainability goals, but some claim that without a directed biogas incentive they would be precluded from obtaining baseload renewable energy (e.g., Adobe, pp. 2-3; Lockheed Martin, pp. 2-3; Nokia, pp. 1-2; NTT, pp. 2-3). Not offering a capital incentive for directed biogas would not actually preclude a business from purchasing directed biogas to meet such goals. If it is uneconomical, there may be valid reasons. For example, if the biogas originates from across the country, it will incur high transportation costs due to the complexity of accounting for all the pipeline owners along this lengthy route.

### **III. Conclusion**

In closing, UTCP looks forward to participating in the modified SGIP as soon as possible, and in supporting workshops to finalize program details. The SGIP should provide sufficient incentive for customers to have the option of choosing the resource that best meets their energy requirements from a technical, economic and environmental perspective, without picking technology winners.

Respectfully submitted:

By: \_\_\_\_\_ /s/

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