



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)

NFCRC REPLY COMMENTS ON ITRON'S REPORT ON COST EFFECTIVENESS OF DISTRIBUTED ENERGY TECHNOLOGIES

The National Fuel Cell Research Center (“NFCRC”) welcomes the opportunity to file Reply Comments in response to the “Administrative Law Judge’s Ruling Requesting Comments on Consultant’s Cost-Effectiveness Report” (“ALJ’s Ruling”) filed in Docket No. 10-05-004 on 5/3/2011. Itron’s Report on Cost Effectiveness of Distributed Energy Technologies (“Itron Report”) was issued in February 2011, and was included as Exhibit 1 to the ALJ’s Ruling. Rather than addressing Itron’s analysis, some opening comments offer only wholesale criticism of the underlying cost/benefit methodology. Such comments are not germane or helpful.

As noted in the ALJ’s ruling (at page 2), these comments are to be “...supplemental comments limited to Itron’s cost-effectiveness report....” The report was used in the preparation of the Staff Proposal, Part II. In addressing the Staff Proposal, Part II, the NFCRC noted several issues with the recommendations made in the Staff Proposal, Part II. First was the fundamental philosophical change recommending that SGIP incentives going forward cover only up to 30% of eligible projects costs. Second was the proposed one-size-fits-all incentive level, differentiated only by fuel and not by technology. Third was the inability of all customers to take advantage of the federal Investment Tax Credit (“ITC”).¹ Fourth was a concern that too few

¹ The federal ITC provides net benefits to California to the extent that the federal tax credits received by eligible California-based projects exceed the share of California taxes paid to enable those federal tax credits. Tax liability is a prerequisite for federal ITC eligibility, thereby excluding from eligibility public entities such as municipalities.

benefits associated with distributed generating technologies were quantified in the Itron Report, benefits that could provide important support for technology-differentiated SGIP incentives.

The Itron Report presents its findings in 563 pages of in-depth analysis of seven different technologies operating on natural gas or biogas, in electric-only or cogeneration mode, using waste heat or storage technologies, as applicable. The results of the Societal Total Resource Cost (“STRC”) test and the Participant Test (“PCT”) for the commercial sector are provided in Table 5-11 of the Itron Report. Table 5-11 represents the culmination of months of detailed analysis by Itron and is described in the Itron Report at page 5-63 as follows:

“Table 5-11 lists the STRC results for the commercial sector in 2016 and the PCT results for 2010 without incentives. Presenting the two different cost-effectiveness measurements side-by-side helps to clarify and compare which technologies are good for society and which technologies may need additional incentives to make them more attractive to participant... The STRC results for 2016 are presented because ***SGIP is designed as a program incorporating market transformation and is currently planned to continue through 2016***. The market transformation goals imply that the program may be willing to incent measures that are not cost-effective in 2010 if this support can help the measure become more cost-effective by 2016. The PCT results for 2010 are presented because SGIP needs to provide potential participants with the needed incentives to encourage technology adoption in the current and future periods.”
(Emphasis added.)

The Itron Report provides the results requested by and indeed required by the Commission to determine which distributed generating technologies should be eligible for what level of SGIP incentives and over which time period.

As noted in the Itron Report, the “SGIP is designed as a program incorporating market transformation...” Market transformation is a prospective process rather than a retrospective process. Future cost-effectiveness of distributed generating technologies is the goal – by design – of the SGIP incentives. The Itron Report provides technology-specific STRC results in Table 5-11 exactly because “the program may be willing to incent measures that are not cost-effective in 2010 if this support can help the measure become more cost-effective by 2016” (Itron Report, p. 5-63). If eligibility for SGIP incentives is limited to those distributed generating technologies that already pass the STRC, the market transformation benefit of the SGIP incentives is in effect valued at zero.

To “quantify the market transformation benefit” (Itron Report, p. 3-9), Itron applied the concept of learning curves to the different generating technologies under review. Learning curves are an important tool used to provide an indication of the potential cost reduction benefits attributable to “learning by doing” as reflected in increases in installed capacity of any given technology. While learning curves may be an inexact tool, they are based on historical experience and suggest that over a limited number of years, committing incentives now may result in development of a robust and competitive market for emerging generation technologies that will not need incentives in the future. The results in the Itron Report reflect Itron’s detailed and technology-specific analyses and demonstrate that each generating technology has its own unique learning curve, in large part a function of its stage of commercial development.

Generating technologies in earlier stages of commercial development tend to be higher cost per unit of installed capacity than more mature generating technologies. Learning curves reflect a possible future path of cost reductions based on robust market deployment and development that is enabled by the SGIP incentives. Each generating technology has its own

installed cost and each generating technology deemed eligible (in part by its future STRC results) will require a different level of SGIP incentive. The Itron Report makes this clear through its analysis and documentation of the required modified internal rate of return (“MIRR”) for each technology under review.

The MIRR is “a financial evaluation of an investment’s attractiveness and can be used to rank alternative investments” (Itron Report, p. 3-33). The Itron Report calculates the MIRR for various generating technologies to determine the relative strength of an investment in each technology without any incentives. The relative strength of any given project provides an indication of the level of incentive that would be needed to make that project attractive to an investor (i.e., to achieve a PCT result greater than or equal to 1.0).

Once a generating technology is determined to be able to achieve cost-effectiveness within a specified future time period through the STRC, the MIRR and the PCT can be used to determine the relative size of the SGIP incentive needed. Each project is unique, even for any given technology. However, use of the MIRR and PCT can provide an important indication of the relative need for SGIP incentives by technology. Differences in MIRR and PCT by technology are evident in the results presented in Table 5-10 of the Itron Report (at p. 5-31) and argue against a one-size-fits-all SGIP incentive.

The Itron Report was commissioned to provide the level of detailed analysis necessary to determine which distributed generating “technologies are good for society and which technologies may need additional incentives to make them more attractive to participants...” (Itron Report, p. 5-63.) The Itron cost effectiveness model has undergone significant review and has been subjected to several rounds of comments in this proceeding. Any model is admittedly imperfect, but the Commission should take advantage of the significant effort put forth by Itron

and the Parties to this proceeding and base its modifications to the SGIP on the analytical results put forth in the Itron Report. Use of the STRC over a specified future time period to identify those distributed generation “technologies that are good for society” and use of the MIRR and PCT to determine “which technologies may need additional incentives to make them more attractive to participants...” is consistent with the purpose of those metrics and would provide a sound basis for determining technology-specific SGIP incentives going forward.

Dated: May 17, 2011

Respectfully submitted,

By: _____ /s/

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PROOF OF SERVICE

I declare that:

I am employed in the County of Sacramento, State of California. I am over the age of eighteen years and am not a party to the within action. My business address is ELLISON, SCHNEIDER & HARRIS; 2600 Capitol Avenue, Suite 400; Sacramento, California 95816; telephone (916) 447-2166.

On May 24, 2011, I served the attached *NFCRC REPLY COMMENTS ON ITRON'S REPORT ON COST EFFECTIVENESS OF DISTRIBUTED ENERGY TECHNOLOGIES* by electronic mail or, if no e-mail address was provided, by United States mail at Sacramento, California, addressed to each person shown on the attached service list.

I declare under penalty of perjury that the foregoing is true and correct and that this declaration was executed on May 24, 2011, at Sacramento, California.

/s/

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