

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

Order Instituting Rulemaking to Oversee  
the Resource Adequacy Program, Consider  
Program Refinements, and Establish  
Annual Local Procurement Obligations

Rulemaking R-11-10-023

**REPLY COMMENTS OF THE GREEN POWER INSTITUTE ON THE  
POST-WORKSHOP COMMENTS ON FLEXIBLE CAPACITY**

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Gregory Morris, Director  
The Green Power Institute  
*a program of the Pacific Institute*  
2039 Shattuck Ave., Suite 402  
Berkeley, CA 94704  
ph: (510) 644-2700  
fax: (510) 644-1117  
gmorris@emf.net

## **REPLY COMMENTS OF THE GREEN POWER INSTITUTE ON THE POST-WORKSHOP COMMENTS ON FLEXIBLE CAPACITY**

Pursuant to the Ruling made by ALJ Gamson at the end of the April 9, 2014, workshop, in Rulemaking R.11-10-023, the **Order Instituting Rulemaking to Oversee the Resource Adequacy Program, Consider Program Refinements, and Establish Annual Local Procurement Obligations**, the Green Power Institute (GPI), the renewable energy program of the Pacific Institute for Studies in Development, Environment and Security, respectfully submits these *Reply Comments of the Green Power Institute on the Post-Workshop Comments on Flexible Capacity*. Our *Reply Comments* address several issues discussed by various parties in their *Opening Comments*, including providing incentives for controllable renewable generation, unbundling QC and FC, and provisions for limited-duration resources.

### **Incentives for Controllable Renewable Generating Resources**

PG&E argues, in their *Comments*: “Some variable resources may be controllable, and the likelihood of such resources being controllable may very well increase moving forward with clear market incentives (pg. 5).” The GPI strongly endorses this statement, and wishes to extend it more generally to all renewables, not just the variable ones. There are a number of ways in which a number of different renewables might be able to contribute to system flexible-capacity needs, ranging from the inclusion of storage systems of various kinds at variable-renewable generators, to incentives for baseload renewable generators to provide the kind of flexible operations that the GPI described for biomass generators in our February 24, 2014, *Comments* in this proceeding.

The point that needs to be emphasized is the one made by PG&E above – that the likelihood of having controllable renewable resources going forward is a function of whether there are clear market incentives in place. The reciprocal is also true: Absent clear market incentives, the likelihood that controllable renewable resources will be

available to operators of the grid is very low indeed. For example, solar-thermal generators will not install thermal-storage systems if the value of energy sold well after the solar peak is not sufficiently greater than the value of power at noon in order to justify the installation of the storage system. Similarly, biomass generators will not power down during winter daytime hours when there is too much supply on the system, and then power back up to full load during the afternoon ramp, if there are no incentives in their contracts to elicit that kind of operating behavior.

In looking to develop a program for flexible capacity resources, the Commission needs to develop rules and incentives that cover the needs of all kinds of renewable resources, including baseload renewables that may be asked to reduce their output during days when the amount of near-zero variable-cost energy, like PV, is sufficient to cover grid-supply needs, then ramp-up to full output during the afternoon ramp and maintain that level through the night. This is a very different operating paradigm than is employed for traditional flexible resources, like combustion turbines, that power up to the peak, then power down and shut off after the peak has passed, and it requires different rules and incentives.

### **Unbundle QC and FC**

In their *Opening Comments*, SDG&E offers a proposal for the unbundling of qualifying capacity (QC) (also called generic capacity), and flexible capacity (FC). The GPI agrees that there is no compelling need for QC and FC to be bundled, and we support SDG&E's proposal. In fact, assuming that the Commission develops counting rules for baseload renewables along the lines that we proposed in our February 24, 2014, *Comments*, which are geared for baseload renewable resources that will continue to operate at full capacity for an extended run following the ramping period, we consider the FC to be a component of the QC. For example, in the example we presented in our February 24 *Comments*, a 25 MW biomass plant providing FC lowers its output level to 16 MW prior to the late-afternoon ramp. It then powers back up to 25 MW during the three-hour ramp, and continues to operate at 25 MW through the night and into the next day. In operating

under this duty cycle, the facility is providing 25 MW of QC during the entire peak-demand period, and 9 MW of FC during the three-hour ramp-up.

### **Limited Duration Resources**

SCE requests that the Commission recognize the capacity value of certain kinds of resources, like storage resources, that may have a shorter operating duration than the three hours required by current rules to participate in RA markets, but that contribute to system capacity needs, and do not threaten stable system operations by virtue of their shorter operating capability. SCE suggests that the Commission consider introducing a new bucket for two-hour resources. The GPI endorses this suggestion.

Dated April 24, 2014, at Berkeley, California.

Respectfully Submitted,



Gregory Morris, Director  
The Green Power Institute  
*a program of the Pacific Institute*  
2039 Shattuck Ave., Suite 402  
Berkeley, CA 94704  
(510) 644-2700  
gmorris@emf.net