

## Docket Optical System - Staff Workshop on Proposed Changes to the ERP Guidebook

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Comments Respectfully Submitted for Consideration by the ERP Staff,

Thank you for posting the draft 2011 ERP Guidebook and for conducting the August 3 workshop. Both the draft Guidebook and workshop offer valuable insight into the issues that prompted the suspension of the Emerging Renewables Program (ERP) and the reasoned approach that the CEC is taking to address those issues.

During the workshop industry participants offered many comments on the proposed program changes and the impact that those changes could have on their businesses. Some of those comments seemed valid and I expect that those directly affected will offer information to support their arguments.

My comments focus on the interpretation and application of the draft Guidebook as currently written.

### Metering

The draft Guidebook requires that all systems include a listed performance meter:

#### I. System Performance Meter

All systems must be installed with a performance meter<sup>8</sup> so that the customer can determine the amount of energy produced by the system. The meter must be listed with the Energy Commission and measure the total energy produced by the system in kilowatt hours (or watt hours) and have a manufacturer's uncertainty specification of  $\pm 5$  percent. ...

This is a reasonable requirement for systems that provide base load power. However, the Guidebook allows certain fuel cell systems that provide backup power and are not connected to the utility grid:

#### II. C. Grid Interconnection

The renewable energy system must be permanently interconnected to the electrical distribution grid of the utility serving the customer's electrical load for the duration of the equipment's expected life. This requirement does not apply to fuel cell systems used for backup generation for emergency, safety, or telecommunication purposes.

The requirement for a performance meter on these allowable backup fuel cell systems is questionable. Often, backup fuel cell systems will be installed without inverters and connected to directly power the DC bus in the event of a power outage. Installing one of the listed performance meters would be costly and offer little meaningful information in this type of an application.

Fuel cell systems typically include built-in monitoring and reporting capabilities that far exceed those of most performance meters. If metering is to be required even for fuel cell systems used in allowable backup applications, the Guidebook should be revised to explicitly allow the use of built-in monitoring systems that are able to provide the required data.

## Reporting Data

Related to the metering requirement, the draft Guidebook also lists minimum reporting requirements:

### III. B. Reporting Data

Rebate recipients must report the kilowatt-hour performance of the system at least six times with a minimum of 30 days between each report within 12 months of receiving the R6 form. Of the six reports, one must take place 12 months after initially receiving the R6 form. ...

As with metering, this is a reasonable requirement for systems that provide base load power. Again, however, it makes less sense for fuel cell systems that provide backup power and are not connected to the utility grid. As written, this would require at least six, otherwise unnecessary, visits to the fuel cell site just to record the metering information. For small systems, just these visits (or provisions for remote monitoring) could easily exceed 10% of the rebate amount.

If operational data is required for backup fuel cell systems, a more reasonable approach could require more data but with fewer reports. Depending on the amount of (inexpensive) memory installed in the monitoring system, a single visit might be sufficient to provide all of the required data, including monthly operating data, for the entire year with one report submission.

## Timing

The draft Guidebook limits the number of applications that can be submitted at one time:

### III. E. Limits on Number of Rebate Applications Allowed at Once

In order to mitigate delays and efficiently process applications, no single retailer may have more than 20 rebate applications, as represented by the CEC-1038-R1 form, submitted to the Energy Commission at a single point in time. Once a retailer has reached its 20 application limit, additional rebate reservation applications from that retailer will only be accepted once a CEC-1038-R2 form has been issued for a reservation already received.

The reasons for this restriction are clearly stated and were explained during the workshop. However, the draft Guidebook falls short in that it does not offer enough information to allow an applicant to plan their work or realize economies of scale. This could be addressed by offering two commitments. First, the CEC could provide preliminary approval of large, multi-site, projects that is contingent on final approval of site-specific applications. Second, the CEC should provide a timeframe within which the site-specific applications will be reviewed. If the review is not completed within that timeframe, the applicant should be allowed to submit additional applications; at least until some higher limit of pending applications is reached.

Finally, considering how late in the year this Guidebook is likely to be finalized and published, it should remain in effect at least through 2012.

As background, I am a professional engineer (California License M19705) and have been working in energy management since 1973. My work has included the analysis and design of solar, wind, and fuel cell projects as well as many other technologies. Recently, my focus has been on bio-technologies and fuel cells because I feel that they offer the most realistic approach to achieving clean and sustainable power production.

Thank you for considering these comments.

Best regards,

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