

## DOCKETED

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**On Provider Quality Assurance Program**

*Additional submitted attachment is included below.*

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**From:** Peter Said <said@trydenenergy.com>  
**Sent:** Wednesday, November 15, 2017 3:27 PM  
**To:** Energy - Docket Optical System  
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California Energy Commission

Docket Unit 1516 Ninth Street, MS-4 Sacramento, CA 95814-5512

1. The adequacy of the Provider Quality Assurance Program and related rater disciplinary processes as required in the HERS Program regulation.

The Provider QA program and related rater disciplinary processes are subject to uncertainty because of the underlying engineering calculations of the HERS rating system.

**Problem:**

The engineering does not account for new technology or combined systems, and is not sufficiently structured to accurately calculate the inputs and outputs. This leaves a grey area which rely's on a rater to use his best judgement (not technical expertise) to determine how to account for the new technology inputs/outputs. Essentially the rater has to guess how to split and apply the data to fit the HERS input system (software).

This leaves the rater and the QA program open to future litigation.

For example, an Heat Pump/ ORC solar water system integrated with a nano-grid can capture 25kW of Solar radiation converting 2.5kW to electricity (10% Electrical Equivielent Efficiency) However the remaining kW can be stored in a working fluid and utilized to provide 20kW of hydronic heating. The pumps in the system utilize some energy (.25kW) but can be used to filter water at the same time, with 10% energy loss. The nano-grid can create efficiency through building management of energy, and by integrating with exterior systems in a micro grid.

Because the engineering is not sufficient to adequately handle new, integrated technology, or technology that can produce energy and create efficiency at the same time, each rater must attempt to split the data according to their limited engineering knowledge. If split in a way detrimental to the Client - the QA program (and the rater) becomes open to litigious risk.

**Solution:**

Require the QA program to evaluate new technology on a regular basis (no less often than bi-yearly) and adjust the engineering accordingly, followed by required training for raters.

Create a simple evaluation program for new technologies with three tracks, 1) Large Business 2) Small Business 3) Start-ups.

Ensure HERS software can be updated regularly, or have module plug-ins with which to guide raters.

Best Regards,

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