

DOCKET

11-IEP-1N

DATE May 15 2011

RECD. May 16 2011

California Energy Commission
Commissioner Karen Douglas
Chair Robert Weisenmiller

Subject- IEPR Committee Workshop- Energy Storage For Renewable Integration
Docket No. 11-IEP-1N (April 28, 2011)

May 15, 2011

I would like to thank the commission for the opportunity to comment on the Energy Storage for Renewable Integration meeting held on April 28, 2011. The commissions open communication on the issues surrounding the integration of more intermittent sources of renewable electrical power generation to meet the RES targets, and the longer term AB 32 goals, is to be commended. I am finalizing this comment during a rather freak snow storm here in Placerville, CA- at an elevation of 2400 feet. The sound of snapping trees is always a concern for those of us who live in the more rural areas in the state- occasionally limbs fall on power lines.

Like many residents in the rural areas of the state I obtain my water from a rather deep well. Losing electrical power adds an additional concern (risk) for my wife and I when we lose power. Unlike the residents in Pollack Pines I happen to be on the same distribution lines as Marshall Hospital so the periods of time that I am without electrical power is normally limited in duration. Last week during a local leadership class I had the opportunity to tour Marshall Medical Center and learn about the issues facing Marshall- 1) changing demographics in the state and El Dorado county 2) increasing health care costs 3) changes in the Medicare and Medicaid programs 4) Regulatory issues related to costs and delays in finalizing a new wing in the facility.

Marshall is finalizing the construction of a new wing at the hospital. Like most of the hospitals in the state Marshall Medical would be classified as a "High Reliability Ratepayers" (per the definition noted on page 47 of the "Distributed Energy Resource (DER) Implementation... CEC 500-2010-014 report"). I was surprised to learn that Marshall currently has the capability to provide 100% of their electrical load within 4 seconds of a power outage. Their back up electrical power generation is provided by a series of diesel generators. During my leadership class I was informed by the director of the El Dorado Transportation authority that their facilities have back up electrical power generation capabilities- as does the El Dorado Irrigation District's Wastewater facility in El Dorado Hills.

What I was wondering is if the CEC, CPUC and CAISO have considered combining Smart Grid capabilities with Demand Response capabilities to include leveraging the installed back up power generation capability, for short to midterm load management, by those public and private institutions that have back up power generation capabilities?

With the advances in renewable, clean burning, low carbon footprint fuels (for example Amyris Biotechnologies Biofene™) it seems to me that leveraging the installed base of backup power generation capability would be a cost effective, carbon neutral way, to address some of the intermittent power fluctuations of solar and wind generation.

My wife and I would be classified as "Environmentally conscious early adopters" (per the CEC 500-2010-014 report). We installed a 6.12 Kw PV system in the summer of 2006 after having leveraged the wealth of information available at the CEC to learn about the various technology options available to us-

including time of use rate schedules paired with our smart net meter from PG&E. When we installed our PV system it was cost prohibitive for us to consider adding back up electrical energy storage/generation capabilities.

Unfortunately due to some rather extreme weather events over the last couple of years (for example a 24 inch snow fall in less than 6 hours with temperatures dropping into the teens leading to major tree damage and power line failures due to falling limbs) even being on a super reliable power distribution grid hasn't been sufficient to ensure that we have power for our well. Hence some form of back up electrical power generation or storage will be needed at our location. Living on a county parcel with multiple buildings means we have lots of separate power sub panels to choose from to install backup power capability- storage or generation.

As we already have a smart meter from PG&E it would be advantageous if the backup power capabilities we plan on putting in place could also be capable of responding to a signal from PG&E to reduce our overall load and/or increase our self generation capability which would have the same effect system load wise. Isolating a portion of our buildings load from the grid could be accomplished with switching enhancements while allowing our PV system to send power to the grid as it currently does during most summer days during peak times.

My personal backup electrical power needs aside I appreciate the opportunity to comment on the issues of energy storage and the 33%RES goals.

Regards,

Mark C. Miller
Placerville, CA 95667
Former Sr. Manger New Technology LifeScan , Inc