

COMMENTS OF ECOFACTOR, INC. TO NOVEMBER 2008 DRAFT LOAD MANAGEMENT STANDARDS

I am writing to the California Energy Commission as a founder and the CEO of EcoFactor, Inc., a Silicon Valley start-up offering a thermostat management service that delivers double-digit savings on HVAC energy usage.

We are very supportive of the goals addressed by the proposed load management standards. And in general we think the specific provisions of the draft committee report do an excellent job of driving California forward toward those goals.

As is often noted, however, the devil is in the details, and we believe that slight changes to three specific provisions would greatly enhance the ability of all concerned parties to deliver on the goals of saving energy and reducing peak loads.

Access to real time data

We first note that the draft creates two classes of energy usage data as generated by smart meters: historical data (up to and ending 24 hours prior to a request) on the one hand, and real time and compiled data from the 24 hours immediately preceding a data request on the other.

LMS-7 provides (p.72):

Each utility shall provide each customer (and their designated third party representatives) with access to the customer's historical consumption data over the previous 12 calendar months. This shall include data up to and including the hour 24 hours prior to the request. Data shall be provided without additional charges.

LMS-7 also provides (p. 73):

Utilities shall not deny access to real time or near real time information to customers who pay the utility fee for access.

We are greatly encouraged by the fact that non-current data must be provided without charge. And we understand that there could be costs associated with providing real time access to AMI data. We believe, however, that the provisions relating to access to data should flow from the provision that acknowledges that the data belongs to the consumer:

LMS-7 (p.73):

Consumers retain ownership of the access rights to any and all data collected by utilities.

While consumers do not have the right to force utilities to install AMI capable of delivering real time data to the consumer, where such data is being created, consumers should have access to all the

data, not merely historical data. For utilities that deploy meters capable of broadcasting (via Zigbee or other means) real time data into the home, we believe that:

(a) making real time data available will offer significant advantages to consumers – real-time data will allow consumers to make much better choices about how and when to use electricity. Real time data can be used to correlate changes in current draw with the cycling of specific devices, and thus easily put the cost of consumption choices in direct financial terms, which should help drive greater efficiency and better consumer decision-making.

(b) making real time data available will offer significant advantages to utilities – real time data will make it easier for consumers to see the financial benefits of load shifting, and should thus drive increased peak load reductions.

Accordingly we suggest that:

(c) Where meters are capable of broadcasting real time data into homes, real time data should be made available to consumers without cost.

(d) For utilities that deploy AMI that cannot broadcast real time data into the home, but can transmit that data back to the utility, the rules should require that the data be made available, to consumers and/or their designees on a non-discriminatory basis, at a fee that is limited by the actual cost of providing that data.

We note that elsewhere in LMS-7, when discussing the obligation to provide hard copies of the data, the proposed standards provide that:

The fee shall be no larger than necessary to cover the cost of handling and shipping the physical document.

The cost of providing electronic access to the data should be much lower, if not zero. The consumer's right to access this data, or to allow third parties to access the data on their behalf, should be subject to similar protections.

Protection of consumer privacy

LMS-7 also provides (p.73):

Specifically, the utilities must obtain permission from the customer before releasing data relating to that customer to any party outside of the utility.

We completely agree that the final regulations should strictly limit the release of data that specifically identifies a customer. But the proposed language is broader than that. Our concern is that this language could be interpreted to prevent utilities from sharing aggregated and/or anonymized data as well.

One of the features of the EcoFactor service is our ability to offer homeowners comparisons between their own energy usage and that of others in their communities. That ability can go well beyond simple comparisons of total spending, and can help a homeowner understand *why* her bill is high – whether due to wasteful behavior, or building envelope issues such as poor insulation, or problems with the HVAC equipment itself.

That analysis can be performed without revealing any user-specific data about any other homeowner, but the accuracy of the analysis is enhanced by access, on an anonymous basis, to data from a wider selection of meter data.

It is quite common in other data-intensive contexts for the terms of service to allow the provider to share anonymized and aggregated data provided that the identity of individual consumers is protected. EcoFactor would like to see the final regulations allow similar uses of data from individual homes. We feel that approach best balances the energy goals of the CEC with well-founded concerns about privacy.

We therefore suggest that LMS-7 should provide that:

Specifically, the utilities must obtain permission from the customer before releasing data *that individually identifies such customer* to any party outside of the utility.

Data formats made available to consumers

LMS-7 provides:

The data shall be provided in a format that supports customer education and understanding of energy consumption patterns, the variable cost of energy, efficiency opportunities, and demand response programs.

One of the most important lessons to arise out of the explosive growth of the Internet is that data can and will be repurposed in ways that were not anticipated when the tools that created the data were first developed. GPS systems put data intended for military use into cell phones and automotive navigation systems; retail and DVD rental websites use historic patterns of consumption to suggest items users would enjoy.

At this early stage in the evolution of energy management systems, we believe it is not in the interests of consumers or of other stakeholders in the utility ecosystem to define *a priori* the forms and types of data that best support the listed goals. If the cited language is intended only to mandate standardization of data reporting, then we support that goal, although we suggest that the language should be made more explicit.

If the cited language is intended to encourage or allow the utilities to choose, summarize or filter the data based upon the utility's conception of what is best for the customer, we believe that the provision will prove problematic. As elsewhere noted in LMS-7, the data – and that should mean *all*



of the data -- is generated by, and belongs to, the consumer. It should be up to the consumer to determine how to make best use of that information. Therefore each consumer should have the right to his or her raw, unfiltered data. Then the market, and the innovations of the entrepreneurs seeking to serve that market, will determine how best to format the data in order to support the goals of customer education and understanding of energy consumption patterns, the variable cost of energy, efficiency opportunities, and demand response programs.

We appreciate the opportunity to share these concerns with the Commission, and would be happy to answer any questions these comments may raise.

Sincerely,

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