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GridFabric comments on Load Management Rulemaking

Additional submitted attachment is included below.



To the California Energy Commission Staff,

Background

GridFabric is an OpenADR specialist and has worked with dozens of companies such as DR aggregators, DERMS platforms, utilities and OEMs of many types to implement automated demand response in various scenarios. This exposure has provided us with experience understanding challenges implementing and scaling both traditional and more advanced load shifting programs. I appreciate the opportunity to comment based on our experience.

I applaud this clear-eyed analysis of the current situation, and I think the proposed solution is a necessary but not sufficient step to fully unlock load shifting at scale.

The good

Thank you for your excellent analysis of the shortcomings of current demand response programs. While they are adequate for the task they were developed for, as you accurately described, they are not suitable for the future state in which load will be flexed up and down on a constant basis. I applaud the goal of enabling load flexibility at the mass scale, and taking advantage of the inherent intelligence and capabilities of smart devices as an avenue to provide this cost effectively and with low friction.

Requiring utilities to provide hourly, locational marginal pricing will provide the market with a much needed signal against which to act. I also agree that keeping these rates updated in a publicly accessible database is an excellent way to spur innovation by making those rates widely available. On the latter point, I encourage the CEC to focus on execution - if the database is not easily accessible by all, it will favor insiders at the expense of potential other innovators. If the API is not well documented and easy to work with, it is not easily accessible. Now is an especially exciting time in the clean energy transition, where many talented individuals from other industries are interested in providing solutions, and this is an excellent opportunity to welcome them into this often opaque and confusing industry - so it is important that solutions do not require insider knowledge to participate in.

Suggestions for improvement

The CEC is taking a "build it and they will come" approach by building a backbone of infrastructure to enable innovative third parties to fill in the gaps. While this is a great idea, fortunately the CEC does not need to bet the whole farm on their particular proposal, since the following two statements suggest that in fact, they will not come - at least not in any significant volume.



I believe to be true and generally accepted, and that I do not believe are going to change in the near future:

1: Mass market consumers are not savvy or motivated about anything to do with the utility market, and especially the rather esoteric world load management. This becomes less true as the form factor gets larger (large commercial & industrial) and you can justify having dedicated energy managers, but even there it generally holds up.

2: Utilities are not strong at customer education or marketing. In fact, it would be surprising if they were, because they are always competing for mindshare against companies that, by necessity, move a lot faster than they do, and survive off the basis of their ability to form and hold customer interest.

If these statements hold true, I believe they doom uptake to be minimal. The CEC should consider and justify why they believe differently.

Exposing customers to real time pricing is an elegant academic idea, but not a practical mass-scale solution. A good example of this came from ERCOT, where Griddy offered a real time pricing plan to the subset of consumers who were willing to take a risk and spend mindshare thinking about their power bill in order to save some money. There is no reason to harp on how that ended - the more important point is that even when it worked, there was only a subset of consumers willing to expose themselves to real time prices.

In addition, the current approach does not resolve equity issues, as wealthy consumers are likely to have more complex and therefore more flexible load types, and the time, mindshare and financial buffer to take advantage of them.

Two entities that are functionally absent from this proposal, but could be the key to wide-scale adoption, are device OEMs and third party aggregators. Since GridFabric is neither, I feel impelled to comment on this without having to seem self-interested.

Aggregators: In the current proposal, perhaps there is a role where a 3rd party could facilitate the customers switch to real time rates, and receive some compensation for doing so (and I applaud the decision to provide a seamless process for third parties to see a customers rates). While some innovation may be unlocked here, the idea that this will be done at scale is wishful thinking - if given the offer to a) do nothing, or b) pay money to a third party to help them possibly save a bit of money on their power bill, most customers will inevitably do nothing. Compare that to the current role of aggregators, where they are allowed to act as middlemen and get paid if their customers provide load shed - this is a much easier pitch to end customers and much more motivating for aggregators. The CEC should consider what changes need to be adopted so that the ingenuity and motivation of third parties can be harnessed, and they become allies in the quest to sign up millions of Californians into offering load flexibility.



OEMs: Device manufacturers are the one entity in the value chain that, due to the rise of IoT devices, have both -

- 1: the ability to control large amounts of load using existing hardware in the field, and
- 2: an existing customer relationship to enable them to gain permission to do so with low friction (sharing the financial benefit, of course).

Currently, the proposed amendment amounts to wishful thinking that device manufacturers will do the right thing and build price responsiveness into their device capabilities, perhaps because end customers will demand it. However, it is safer to assume that they will not demand it, and therefore it will not get built. The ability to provide meaningful load flexibility will not be a buying decision for end customers, so there is no incentive for device manufacturers to do more than just the bare minimum that is regulated, and certainly no incentive to fund innovative and performant load flexibility. I recommend an explicit financial benefit for device manufacturers to provide and sustain load flexibility.

In summary, I applaud the direction and request to keep pushing to address the gaps in their proposal, if not in this rulemaking than in a future one. In particular, I recommend that the CEC provides concrete recommendations as to how aggregators and device manufacturers can be directly compensated to be a part of the solution, or state explicitly why, contrary to prior evidence, millions of customers should be expected to buy smart devices, connect them to the utility platform, sign up for a real time rate plan and continue to monitor their performance over time.

Thank you again for this analysis and the opportunity to comment.

Sincerely,

Matt Hale
Cofounder, GridFabric