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## Polaris Energy Services comments on Load Management Standards Draft Analysis

See attached.

Additional submitted attachment is included below.



## Polaris Energy Services Comments on Load Management Standards Draft Analysis

David Meyers, CEO

You had me at "these programs are incapable of shifting loads to periods of high renewable generation, and thus are inadequate for supporting the carbon-free grid of the future."



This is the first document/article/presentation/proceeding that states the obvious fact that what we are doing is not working very well and that we should look for alternatives. The CPUC reliability proceeding is a case in point with millions of dollars for the things that contribute the least!

I also appreciate the context and history, much of which I know and/or have lived, but the cohesive timeline is helpful. I have to acknowledge that I was previously critical of the MIDAS idea--it seemed unnecessary to add another system on top of the investments in OpenADR, Green Button, smart meters and OASIS--but I see that a clearinghouse outside the walls of the utilities is probably the only way to force progress.

## Comments:

 An additional 'con' for TOU, that looms large in the non-residential rates, is that a huge component of the carrot/stick is the demand charge. The impact is that a site that has not been able to shift load for part of the billing cycle loses most of the incentive to do so later in the billing cycle. It's an all or nothing game where, using 2020 as an



- example, we would really like a facility that had to run on peak during the first week of August to be strongly incentivized to shift off peak during the third week of August.
- Aggregators have been around closer to 15 years than 5, as stated. More important, I think it is important to look at the relative success of DRP aggregated programs vs. utility. The tiny impact of CPP compared to programs open to aggregators is indicative. It could actually be a better program fit for many customers but without someone motivated to explain, sell and manage the program, it withers. I think this point is important as we look toward dynamic pricing models...in theory, their simplicity eliminates the need for aggregators, as it should, but I would think about how to include people and companies that are highly motivated, knowledgeable and focused on demand flexibility to help make it happen. "Build it and they will come" simply doesn't work.
- D2. Incentive Programs refers to day-ahead and real-time prices. I think it is worth considering--and our research demonstrated the value and feasibility of--price signals that are more than one day ahead and less than three years (TOU). Surely, there is some lost benefit if pricing is locked in on a weekly basis, for example, but it is still a much more flexible signal than TOU. On the other hand, there is a lot of load that can be scheduled more flexibly with that time horizon than with a day-ahead signal. Ag pumping is my favorite, of course, but industrial processes are similar and I think we'll see the same for fleet charging.
- Other data for MIDAS. I understand that managing data for X number of rates and tariffs is orders of magnitude less than for individual service points BUT there is a huge problem with visibility into metadata at that level that will hinder these efforts. For example, we regularly get program registrations kicked back because of prior enrollments that were not visible. Similarly, MIDAS price signals will not be accurate if the end user (or application developer for the end user) cannot combine it with things like a CPP or DRAM enrollment or a NEM tariff. These are unavailable or difficult to divine from Share My Data, for example.
- My pet peeve look for the load where it is available. The analysis contains 12 mentions of water heaters, 26 of cooling and 34 of thermostats, 0 mentions of irrigation pumping, and 1 mention of pumping (other than the name of SCE's program), yet this is LBNL's assessment of load shift potential by end use. If they are right, we should stop focusing so much on residential load and more on Ag and office.



BERKELEY LAB
Energy Technologies Area

## California DR Potential Study Phase 3 Final Report

May 4, 2020

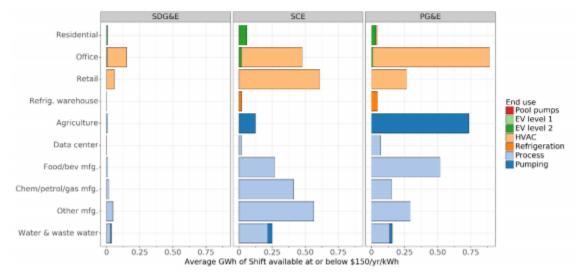


Figure 3-9. The Shift resource available in forecast year 2030 at the BTM battery price referent (\$150/yr/kWh), disaggregated by utility service territory, building type, and end use.

And last, but not least, Polaris is not listed as a DR Provider in Appendix D.