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Enervee Comments on Low-Income Barriers Study

Additional submitted attachment is included below.

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Enervee Comments on "A Study of Barriers and Solutions to Energy Efficiency, Renewables and Contracting Opportunities Among Low-Income Customers and Disadvantaged Communities" (Draft Staff Report)

Enervee welcomes the opportunity to share our thoughts on the draft staff report, responding to the specific questions posed by the Commission.

Founded in California in 2011, Enervee has built a global data & SaaS platform that analyzes consumer product markets in real time and provides online marketplaces that engage customers, activate clean energy markets and drive energy savings. We currently operate marketplaces serving roughly 12% of all US households, on behalf of leading public and private utilities, including LADWP, PG&E and SDG&E in California.

Our comments can be summarized as follows:

1. The study should be expanded to include a dedicated discussion of plug load & appliance (PLA) efficiency barriers and solutions, given their dominant role in projected electricity demand growth and their contribution to the energy burden of low-income households and disadvantaged communities.

2. Although data limitations are discussed, critical data-related barriers to PLA efficiency were not highlighted, including: Lack of market transparency with respect to the energy attributes of PLA; lack of data on the shopping behavior and segmentation of lower income households; lack of data on consumer product market trends and model-level

incremental costs, product availability, etc. Such data are increasingly available and should inform program intervention strategies and improve program delivery.

3. In terms of solutions, an enhanced customer focus deserves greater attention. Beyond the discussion of customer-related NEBs, improving the customer experience, establishing a trusted advisor relationship and empowering customers to manage their energy holds great potential to overcome barriers and drive efficiency among low-income customers and disadvantaged communities.

The study should be expanded to include a dedicated discussion of plug load & appliance (PLA) efficiency barriers and solutions

The report does not provide a dedicated discussion of plug load barriers and solutions. Plug-in equipment and miscellaneous loads are responsible for two-thirds of California's residential electricity consumption today, and are expected to contribute 70% of electricity demand growth from 2015 to 2024[1]. Plug loads are therefore explicitly targeted by California's Long Term Energy Efficiency Strategic Plan (2011 update) and Existing Buildings Energy Efficiency Action Plan (2015), with a view to slowing and reducing plug load energy consumption. Plug loads are also increasingly important for achieving the whole home retrofit and zero net energy (ZNE) new construction goals included in the Strategic Plan (all new residential being ZNE by 2020 and all new commercial being ZNE by 2030), as hard-wired building technologies and building systems themselves use less energy.

Another reason to tease out barriers and solutions with respect to plug load efficiency is because this is an area that offers an opportunity for utilities to develop a more trusted, ongoing relationship with lower income households that delivers greater value to both households and society.

Critical data-related barriers to PLA efficiency were not highlighted

One important barrier is the lack of market transparency with respect to the energy attributes of consumer products[2]. The flip side of the coin is that Program Administrators

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[1] NRDC (2015): Plug-In Equipment Efficiency: A Key Strategy to Help Achieve California's Carbon Reduction and Clean Energy Goals. NRDC Issue Brief.

[2] Binley et al. (2016). Insights from PG&E's Marketplace Initiative on Influencing Purchasing Decisions. Proceedings of the 2016 ACEEE Summer Study on Energy Efficiency in Buildings, pp. 6-1 to 6-13.

(PAs) have been hampered by insufficient market data for good program design. Fortunately the digitization of commerce enables us to fill the consumer product market data gaps.

Another barrier is that we do not have a good understanding of the shopping behavior and segmentation of lower income households. What products are typically purchased new (vs. used), for example? Which products are purchased via which channels? What are the most important purchasing decision criteria by product category?

Enervee data show that there are opportunities to improve efficiency programs for lower income customers by taking full advantage of newly available market intelligence and data on online behavior, which the report scarcely delves into. Data-driven program design can help better identify and target the most suitable intervention strategies, and behavior data are essential to optimize program performance. Just to give one example, efficiency does not always come with a higher price tag[3], but consumers (and PAs) have, until recently, had no way of knowing this.

Another often overlooked barrier is "rational inattention" to energy efficiency. The fact is that – even in cases where we are aware of and informed about energy savings opportunities – we often don't care. Why is this so? If you think about it from your own perspective as a consumer, small business or multi-family building owner, then it's not surprising that when potential energy bill savings are small (or it's time consuming to figure out the financial implications of selecting one product over another), you choose not to worry about this product attribute. We are all busy people, and we often care more about product attributes other than energy savings opportunities like TV screen size or whether a fridge will fit in the available space. This is particularly relevant in the fastest growing plug load and appliance categories, many of which are not included in utility efficiency programs. We've written several white papers that touch on this phenomenon and how to overcome it (blog.enervee.com). This is why a customer centric approach – and greater attention to behavioral interventions – are important.

An enhanced customer focus and behavioral interventions hold great potential to overcome barriers and drive efficiency

The discussion of non-energy benefits touched on this, but a greater customer focus is needed. Beginning with problem statements from the customer perspective may help

[3] https://blog.enervee.com/seeing-the-bigger-picture-2ab0132f04ea#.csjg6xkoq

identify more effective intervention strategies, because they deliver benefits that building owners, small businesses and shoppers truly value. What are their pain points, and how can we help address them in ways that also drive energy efficiency?

One important strategy that has been neglected to date is to develop programs that empower low-income households and communities to be energy-smart consumers and large buyers. Low-income households are making 1-time purchasing decisions that lock-in energy demand – in particular, of electronics. Electronics products are among the fastest growing categories, yet are often unsupported by existing efficiency programs. Televisions are a prime example; they are responsible for 7% of national purchased electricity and – given the lower average price tag of efficient models, short replacement cycles and large volume of TV sales, nudging low-income consumers towards energy-smart TV purchases can deliver large savings quickly and cost-effectively.

Behavioral interventions are scarcely discussed in the report, but could be effective. In the case of Enervee, we operate consumer-facing marketplaces on behalf of a number of CA utilities that assign a relative energy efficiency score to each product model, with the goal of making consumer product shopping experiences easier for busy people – and the feedback has been positive. Our experimental results suggest that lower socioeconomic status participants prefer more efficient products when the Enervee Score is present, and that the effect is at least as strong as for the general population[4].

Other data-driven solutions include geographically and temporally targeted marketing of demand management programs that provide PLA (e.g., air conditioning) incentives or services that overcome barriers faced by low-income households. Such a targeted approach would allow PAs to capitalize on the locational value of the energy savings and demand reductions to support higher incentives for (connected) super-efficient consumer products, such as room AC, so that direct install is not the only option to deliver low-income programs. Direct install programs could also become more user friendly by giving customers more choice & control (e.g., bulk procurement to support online product selection by customers, or online scheduling of installation).

Customer expectations are changing rapidly, and low-income programs will need to deliver a better user experience, if they are to be accepted against the backdrop of experiences

[4] https://blog.enervee.com/exploring-the-many-roads-to-an-energy-efficient-future-8ecab276f750#.5owdycs0w

offered by telecom, transportation and entertainment companies among the increasingly influential cohort of millennials.

Taking a customer-centric approach and piloting new low-income program interventions that leverage utility-branded Marketplaces – and the consumer product market intelligence and behavioral insights they generate – should be a key strategy to drive low-income energy efficiency.

Sincerely,

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