DOCKETED	
Docket Number:	25-IEPR-05
Project Title:	Load Shift Goal Update
TN #:	264601
Document Title:	Derapi, Inc. Comments - Derapi comments on 2030 Load Shift Goal Update Workshop
Description:	N/A
Filer:	System
Organization:	Derapi, Inc.
Submitter Role:	Public
Submission Date:	7/9/2025 4:42:28 PM
Docketed Date:	7/9/2025

Comment Received From: Derapi, Inc.
Submitted On: 7/9/2025
Docket Number: 25-IEPR-05

Derapi comments on 2030 Load Shift Goal Update Workshop

Additional submitted attachment is included below.

350 California St, 4th Floor
San Francisco, CA 94104

California Energy Commission
715 P Street
Sacramento, CA 95814

July 09, 2025

Re: Docket 25-IEPR-05 Load Shift Goal Update

On behalf of Derapi, Inc. I am pleased to submit the following comments on California's progress in improving load flexibility resources and the strategies to achieve 7 GW load-shift by 2030, following the IEPR Commissioner Workshop on California's Progress Toward the Load-Shift Goal held on June 25, and the Demand Flexibility Summit held on May 22. Derapi was pleased to have a company representative participate in both events. We thank the Commission for their work to organize these events, and for your ongoing efforts to achieve the 2030 load shift goal.

About Derapi

Derapi (www.derapi.com) is a California-headquartered company that provides software data infrastructure services to the Distributed Energy industry, including solar and battery storage installers, demand flexibility providers and energy management firms. Our software application programming interface (API) streamlines communication with behind-the-meter (BTM) distributed energy resources (DER) such as solar inverters, battery storage systems, and other smart energy devices. Our goal is to accelerate electrification and decarbonization by enabling energy consumers to unlock the full value of their investments through the use of data and communication technologies. With respect to load flexibility, Derapi provides DER aggregators with certain software capabilities necessary for devices within their aggregation to respond to program events and to retrieve the data necessary to perform measurement, verification, and settlement.

Comments on strategies to meet the 2030 load shift goal

The customer/stakeholder experience while participating in load flexibility needs further focus

Discussions during both the Commissioner Workshop and the Demand Flexibility Summit presented several topics related to policy, program, and market mechanisms for scaling load flexibility. One topic that did not receive sufficient attention was Customer and User Experience, specifically the impact that the experience of customers and other stakeholders ("users") who participate in the load flexibility process has on California's ability to scale the availability of load shift resources. Some of the challenges were mentioned during the

presentation on "California Demand Flexibility Summit and Stakeholder Outreach Results" during the Commissioner Workshop but were not discussed in detail.

Some of the user experience challenges described include:

- Frequent program changes resulting in market uncertainty
- Confusing and conflicting program requirements limiting participation
- Difficulty of data access
- Lack of seamless customer engagement

Proposed solutions and strategies for addressing these challenges include:

- Streamline and modernized wholesale market process
- Unified and simplified utility programs

We appreciate the inclusion of these items in the summary and would like to see the Commission delve more deeply into these issues and ways to address them. While rate structures, market mechanisms, and program designs are important considerations, human factors are also a key component of scaling load shift at the speed required to meet California's 2030 goal.

Load flexibility is often discussed in terms of a quantity of megawatt resources, the value of those resources, or the devices that provide those resources. What can be missed in this framing is that load shift resources are ultimately *customer* resources, and those customers are *people* who determine whether they are willing or able to provide their resources for use by the larger electric system. Even if the legal entity listed as a "customer" is a business, there is a person or group of people in that organization responsible for making a decision to participate in load shift and operationalizing that participation. The quality of the participation experience can be a determining factor in whether a customer decides to participate.

An example of how a quantitative, device-focused approach can lead to poor customer experience can be found in many existing load flexibility programs in California. Most load flexibility programs in California focus on a particular device. Separate programs exist for smart thermostats, EV charging, battery storage, and other loads. Each of these programs, although they may be sponsored by the same entity (such as a utility) may:

- Be managed by different organizations or entities
- Require separate enrollment
- Have different (and sometimes conflicting) eligibility requirements
- Have different (and sometimes conflicting) dispatch criteria and performance requirements
- Have different reporting requirements, formats, and deadlines
- Have different performance measurement methodologies and settlement calculations
- Have separate incentive payment mechanisms and timelines

This creates confusion for customers and adds cost and complexity for others in the load flexibility ecosystem. This device-based approach may have been appropriate for a time when a customer had a single flexible energy device at their disposal. With the increasing adoption of digitally-enabled energy devices, coupled with the speed of advancements in software, energy optimization, and machine learning, this assumption no longer holds. Program designs that encompass (or at least allow for) multiple devices can provide a more elegant experience for the customer, address many of the challenges listed above, and facilitate higher levels of enrollment and ongoing participation.

We believe that taking a user-centered approach will reveal additional pathways for meeting California's load shift goals. This will require a deliberate focus on the details of the user experience for all aspects of the load shift journey, including:

- Participant recruitment
- Participant enrollment and onboarding
- Equipment installation and commissioning
- Resource operation and event participation
- Measurement and verification
- Settlement
- Program analysis and evaluation

This effort will also need to consider the entire ecosystem of load flexibility stakeholders. It is our observation that in most discussions of load flexibility in which we have participated, the perspectives of one or more key sets of stakeholders are missing. These stakeholders include:

- Electricity customers (covering all customer segments and load types)
- Equipment manufacturers and retailers
- Project developers and asset operators
- Installation and maintenance contractors
- Load flexibility software developers
- Aggregators and energy services providers
- Program implementers and evaluators
- Utility grid operators, engineers, and planners
- Regulators and other policymakers

Derapi encourages the Commission to proactively seek out and engage members of these stakeholder ("user") groups to hear the experiences of individuals who personally work with each aspect of the load shift journey and its challenges as their primary daily responsibility. As these groups do not often have opportunities to interact with each other, it will also be beneficial to provide a forum for these groups of stakeholders to exchange ideas and perspectives in order to unlock further innovation. Such individuals may not be aware of or have the means to participate in the typical Commission comment process, so we encourage

the Commission to exercise creativity in finding ways to ensure a comprehensive set of experiences and needs is considered.

Non-market resources can be a substantial source of load shift capacity

Derapi believes that non-market resources such as the Demand Side Grid Support (DSGS) program should be given more recognition for their contributions to load shift, particularly when such resources are provided by battery storage, which can be coordinated and dispatched in a reliable and predictable manner.

We note that the Commissioner Workshop presentation on "California's Progress Toward the 7GW Goal" listed the 2024 capacity of DSGS as 161MW (slide 9), far below the 516MW enrollment listed in the Commission's own presentation in the DSGS Program Staff Workshop on October 18, 2024 (slide 8). We believe the presentation given during the Commissioner Workshop is underestimating the load flexibility potential of DSGS. This is particularly with respect to Option 3, which involves battery storage systems dispatched not on an emergency basis, but rather using pricing signals. Option 3 is the largest cohort of DSGS participation by enrolled MW capacity (248 MW from nearly 1,300 participants in 2024,) and has seen substantial growth since its inception.

Efforts outside of California can serve as valuable models

Derapi appreciates the Commission inviting speakers from other jurisdictions to give presentations during the Commissioner Workshop. While California was a pioneer in promoting distributed energy resources and demand response, other states and international jurisdictions have since produced policy and market innovations that adapt to the rapidly changing landscape of flexible load devices and capabilities. We note that the New York VDER tariff presents an interesting combination of dynamic and fixed prices for different load flexibility value streams. We encourage the Commission to further explore how such a structure could be adapted for California.

The Commission should also explore opportunities to enable innovation in load flexibility by third parties, such as those presented by Energinet from Denmark. In that case, availability of a data platform allowed private software developers to build products to help customers adjust load for their personal financial benefit as well as that of the broader system.

Barriers to deployment of load flexible equipment should be addressed

Derapi also encourages the Commission to explore how removing barriers to deployment of load flexible equipment such as battery storage and bi-directional EV chargers can increase load shift capacity. Examples of such barriers include:

- Interconnection processes, costs, and timelines

- Permitting processes, costs, and timelines
- Differences in interpretation of applicable Codes and Standards
- Installation contractor and equipment distribution channel awareness and training related to load flexibility

We thank the Commission for undertaking this work to meet California's Load Shift goal, and for the opportunity to provide comments. We look forward to further opportunities to participate in the process.

Sincerely,

Thomas Lee
Founder & President
Derapi, Inc.