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Load Management Standards Plan

March 13, 2026

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Orange County Power Authority (OCPA) Load Management Standards (LMS) Compliance and Strategic Roadmap

1. Introduction to Load Management Standards (LMS)

In 2022, Load Management Standards (LMS) was introduced to accelerate demand flexibility statewide in support of climate initiatives, renewable energy integration and grid stability. The LMS applies to investor-owned utilities (IOUs), large publicly-owned utilities, and Community Choice Aggregators (CCAs) serving over 700 GWh annually — including OCPA.

The primary objectives of LMS are to:

- Reduce greenhouse gas (GHG) emissions
- Improve grid reliability
- Lower system-wide energy costs
- Increase customer choice through time-dependent rates

2. OCPA's LMS Compliance Progress

2.1 MIDAS Reporting and RIN Accessibility

Since Fall 2023, OCPA has complied with the LMS requirement by uploading all time-dependent rate tables and Rate Identification Numbers (RINs) to the CEC's Market Informed Demand Automation Server (MIDAS).

2.2 Rate Identification Numbers (RIN) on Customer Bills

CEC mandated large CCAs, including OCPA, to include a RIN on customer bills by April 1, 2024. In compliance with this requirement, OCPA in collaboration with Calpine implemented RIN and QR codes on customer bills starting April 1, 2024. Currently, QR codes do not link to a specific webpage, but this may be considered as more progress is made on the development of the Single Statewide Standard Tool. RIN keys are added to OCPA rate sheets posted on OCPA's website, allowing customers to match their rate to the corresponding RIN displayed on their bill. OCPA has been monitoring and engaging

in the process with other regulated load serving entities (LSEs) to develop the statewide RIN tool pursuant to 20 CCR Section 1623(c). A proposed plan for the tool was submitted to the CEC for review on October 1, 2024. OCPA will continue to collaborate with other LSEs and the CEC towards the implementation and maintenance of the statewide RIN tool in a timely manner subject to the tool's approval by the Commission.

2.3 Time-Dependent Rates and Rate Management

Hourly rate tables for each of OCPA's Time-of-Use (TOU) rates have been consistently uploaded to MIDAS, meeting both the format and technological delivery standards set by the CEC. OCPA maintains technical capability for continued compliance and will keep uploading time-dependent rates once dynamic rates are finalized in 2027 and thereafter.

3. OCPA's Research on Adaptability of Residential Load for More Effective Load Shift

3.1 Residential Load Findings and Paired Technology Solutions

Historical analysis reveals that residential load spikes significantly between 5–9 PM, especially during summer months. This period also coincides with sharp increases in wholesale electricity prices, which OCPA's interactive research suggests is driven more by aggregated residential demand than by large commercial load. Due to the limited load-shift flexibility and existing technology constraints in households, this presents challenges for voluntary demand response. To address this issue, OCPA is actively planning to enhance incentives for paired solar and battery programs, where we've observed that individual households can make a meaningful impact by smoothing or shifting their consumption patterns.

3.2 Impact of Solar and Battery Systems on Historical Load Patterns

Despite the unique characteristics of the residential load profile, OCPA has found on-peak hour load shift through paired solar and battery installations, though this approach relies heavily on individual account holders' awareness and participation. An analysis of Figure 1, which shows solar panel operation alone, reveals a steep upward trend beginning after 4 PM. However, following battery installation and operation, as shown in Figure 2, this steep upward trend was successfully managed and reduced (for the same month of two different years).

Figure 1

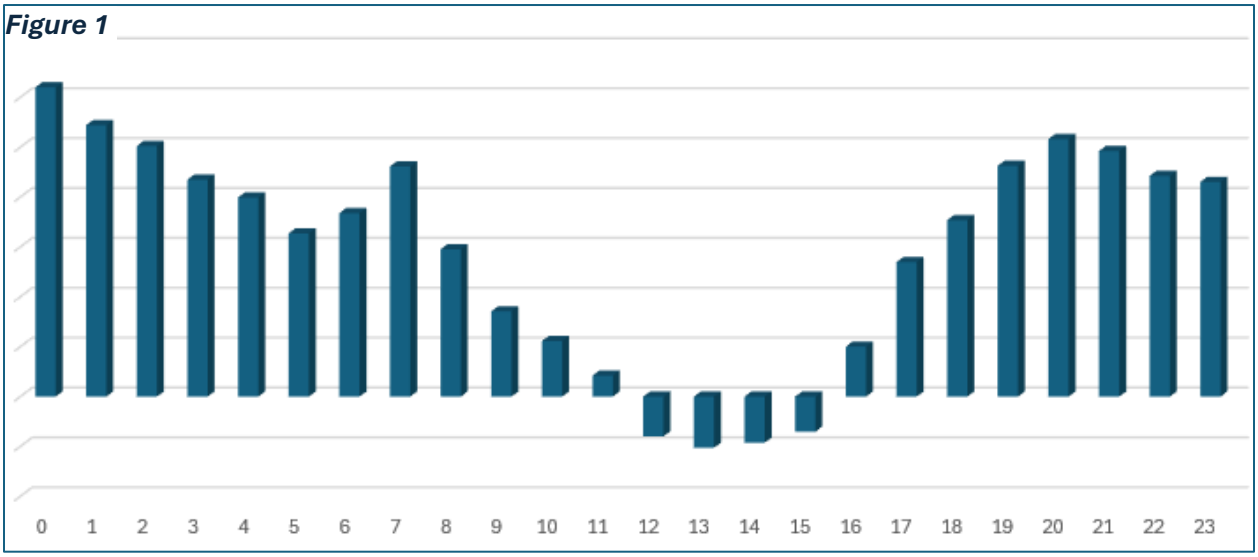
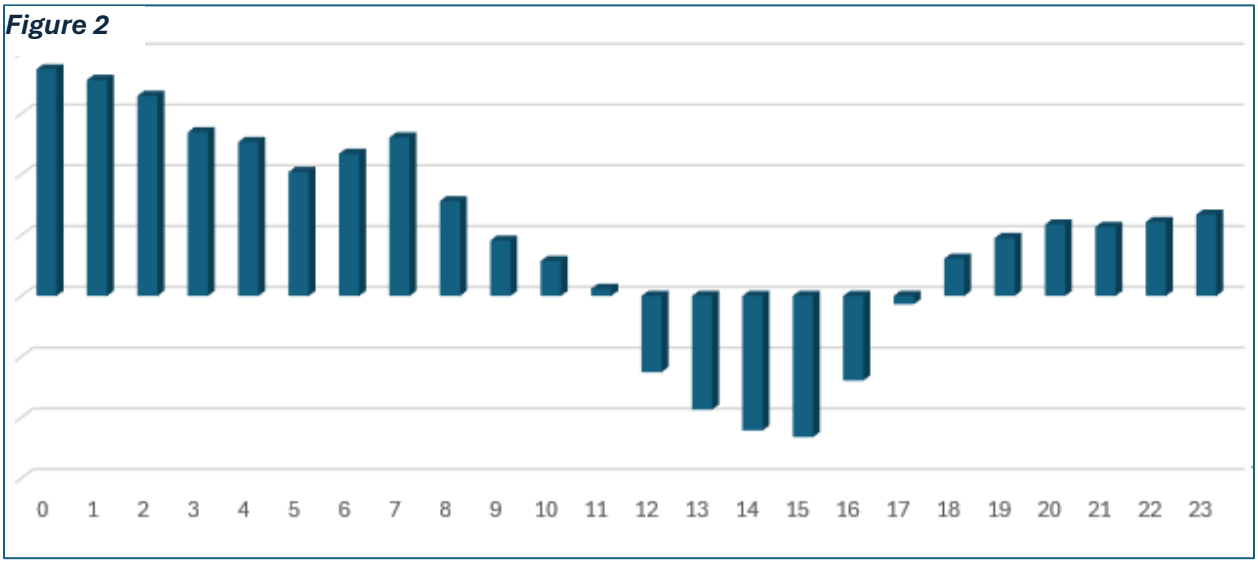


Figure 2



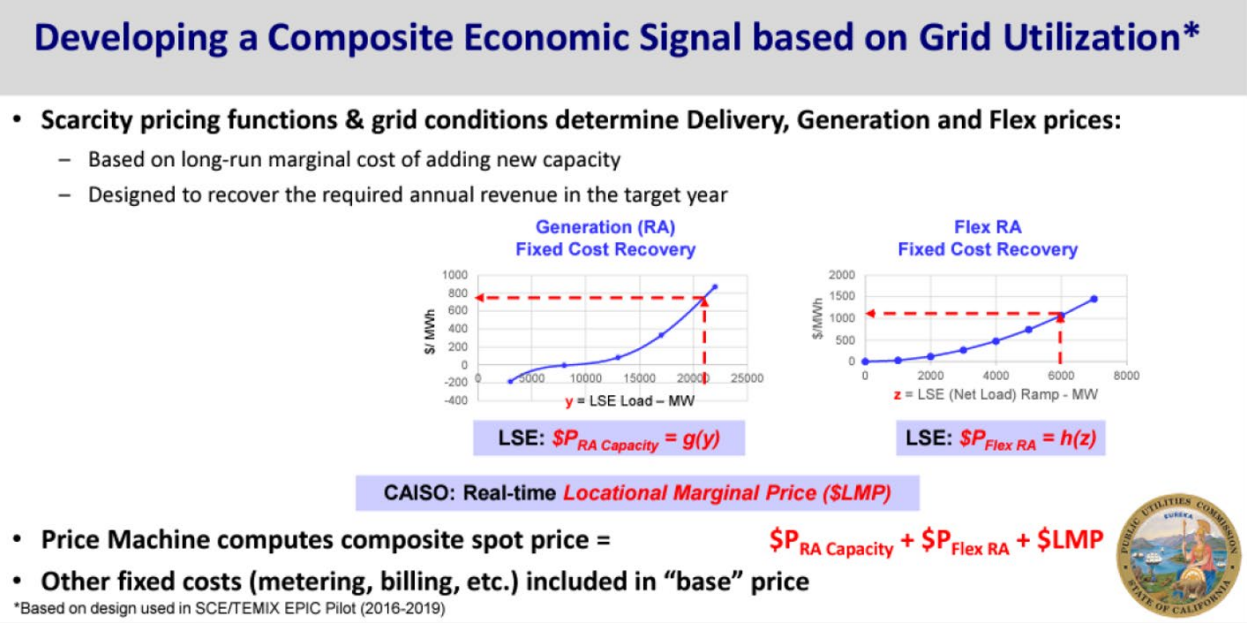
4. OCPA's Time-Dependent Rate Development

By July 1, 2025, qualified CCAs and IOUs are required to submit a dynamic rate for board approval. Subsequently, by July 1, 2027, they must offer their limited customers the option to voluntarily participate in this rate.

The development of dynamically changing rates necessitates ongoing communication regarding cost-effectiveness and technological feasibility, as well as clarity about the expected outcomes, such as load shifting, with the CEC, utilities, and other CCAs.

When establishing dynamic rates, it is essential to consider a variety of factors, both known and unknown. These factors include real-time Locational Marginal Price (LMP) with fixed cost recovery, which impacts Resource Adequacy (RA) costs, and quantifiable Greenhouse Gas (GHG) emission factors that serve as success metrics for the LMS. Additionally, as a financially responsible agency, it is crucial to assess the fiscal impact of customers changing their load shape. Continuous communication with SCE regarding the outcomes of their Dynamic Pricing Pilot, the CEC's expansion plans related to the LMS, and the technological feasibility of these initiatives is paramount for ensuring our future success in rate-setting (see Figure 3).

Figure 3



4.1 OCPA's Dynamic Rate Design and Its Billing Mechanics

Since the ultimate goal of dynamic rates is to encourage load shifting, OCPA is considering maximizing our customers' historical load profiles and plans to initially focus on large commercial/industrial customers. Large commercial/industrial customers are good candidates for initial participation, as they are better equipped to utilize dynamic rates through technology/automation and are likely to have dedicated

employees to monitor and optimize energy use. At the moment, we are not planning to actively communicate with residential customers about this program because their participation would require a level of energy sophistication and monitoring effort that would be burdensome for most residential customers.

OCPA is planning to develop a forecasting methodology to predict the load behavior of subscribed customers and provide anticipated grid stability over the next 7 days. This forecasting engine can also provide an estimated bill for the same period, including the T&D portion, so the customer can see the estimated financial impact of the full bill. In this forecast methodology, the estimated bill will be reconciled with the actual RT prices after a certain period (at the moment, it is too soon to share how soon we can complete this process).

Until OCPA is confident in the cost-effectiveness of implementing dynamic rates, we will consider this program a pilot. In this pilot program for a limited number of customers, we will consider providing flexibility in enrollment to allow them to minimize risk for 2027 and 2028 (if possible). This would entail calculating what the customers' bill would have been under a standard TOU rate, and capping their annual bills at this value to ensure no customer is unduly burdened financially by participating in the pilot. Also, our customer interactive dashboard can provide a bill comparison showing a regular TOU-based bill vs. a Dynamic Rate-based bill. This bill comparison dashboard can also provide estimated shifted load and GHG reduction amounts OCPA plans to have this billing mechanism managed outside the regular billing system.

5. Strategic Priorities and Timeline (2025 and Beyond)

Updated LMS Compliance and Dynamic Rate Development Plan

- Design and develop dynamic rate simulator to back-test 2026 estimated outcome by (Q4 of 2026)
- Assess the feasibility of the dynamic rate application (to selective accounts), possibly with other programs of OCPA by November/December 2026
- Develop a minimum of one dynamic rate for commercial customers by December 2026 (Currently considering large commercial/industrial customers).
- Develop and test shadow bill calculation logics by December 2026.
- Build customer report/dashboard (or customer portal) by March 2027.
- Test the rate in Spring/Summer 2027 and implement a limited participation by late 2027 to early 2028.
- Customer portal with API connection is currently considered; however, the timeline is undecided due to the following factors.

    - Actual necessity/demand
    - Cost of maintenance
    - Difficulties in providing immediate attention (24/7) to major system/connection issues
- Focus on customers with significant load shift potential and dedicated energy management resources, such as an existing building management system (Initial approach).
- Establishing initiatives that help monitor and reduce peak load and encourage residential battery pairing to provide pathways for scalable demand response (2026 and beyond)