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Load Management Standards

Annual Report of Compliance Plan

Implementation

**Los Angeles Department of
Water and Power**

December 10, 2025

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1. Introduction

In accordance with California Code of Regulations, Title 20, Section 1623.1(a)(3)(C) (20 CCR § 1623.1(a)(3)(C)), each Large Publicly Owned Utility (POU) is required to submit to the Executive Director of the California Energy Commission (CEC) annual reports demonstrating its implementation of its Load Management Standards (LMS) Compliance Plan approved pursuant to 20 CCR § 1623.1(a)(3)(B). This report is required to be submitted one year after the compliance plan is approved pursuant to subsection 20 CCR § 1623.1(a)(2) and annually thereafter.

On December 10, 2024, the rate approving body of the Los Angeles Department of Water and Power (LADWP), the Board of Water and Power Commissioners, approved LADWP's LMS Regulations Updated Compliance Plan (LMS Compliance Plan).

Since approval of the LMS Compliance Plan by the Board of Water and Power Commissioners and subsequently by the CEC, LADWP has progressed in the following areas relating to its LMS Compliance Plan:

- Submission of time-dependent rates to CEC's Market Informed Demand Automation Server (MIDAS) via the MIDAS API (20 CCR § 1623.1(c))
- Providing Rate Identification Numbers (RINs) on customer billing statements and online accounts using both text and QR code (20 CCR § 1623(c)(4))
- Participation in the development of a Single Statewide RIN Access Tool (SST) (20 CCR § 1623(c)(1))
- Development of marginal cost-based rates (20 CCR § 1623.1(a)-(b))
- Development of MIDAS-based hourly marginal signal programs (20 CCR § 1623.1(a)-(b))

While full implementation of the LMS regulatory requirements imposes substantial challenges and costs, LADWP acknowledges the benefits for both it and its customers that are expected to result once implemented. By encouraging the use of electrical energy at off-peak hours as well as the control of daily and seasonal peak loads, electric system efficiency and reliability should be improved, the need for new electrical capacity would likely be reduced or delayed, and fossil fuel consumption and greenhouse gas emissions would likely decrease. All these benefits would likely lower the long-term economic and environmental costs of meeting the electricity needs of LADWP's customers.

Updates for each LMS milestone follow below.

2. Time-dependent rate submission to MIDAS via the MIDAS API

As previously reported, all applicable time-dependent rates have been automatically uploaded on a daily basis since April 4, 2024, with the exception of rates that are not currently utilized by customers. Per CEC staff's directions, the uploaded rates include the State Energy Surcharge and Los Angeles City Tax, where applicable. Although there are approximately 300 base rate configurations, tax variations increased the total to 1,720 RINs uploaded each day. Some customers may be exempt from the State Energy Surcharge, City Tax, or both.

3. Providing RIN(s) on customer billing statements and online account using both text and QR code

As of March 28, 2024, all RINs and rate variants for each time-dependent rate have been stored in the Customer Care and Billing (CCB) system, and the corresponding RINs and QR codes are included on customer billing statements. The challenge previously identified for rates that incorporate kVarh factors remains unresolved. For these rates, the kVarh-based charges depend on each customer's individual power factor, which can only be accurately calculated at the end of the billing period. Because the power factor may change throughout the month, any RIN provided from the last billing cycle—such as in MIDAS—may not reflect the current applicable rate. The same limitation applies to all XCD rates, which rely on each customer's load factor. Load factor must also be determined at the end of the billing period, and the last billing cycle's applicable demand billing component may differ from the current value. LADWP continues to evaluate potential approaches, but at this time the RINs provided will be the rates from the last billing cycle.

A dedicated webpage has been created to provide information on RINs and LMS, available at: <https://www.ladwp.com/account/understanding-your-rates/load-management-standards>.

4. Participation in the development of an SST

On October 1, 2024, the applicable investor-owned utilities (IOUs), POUs, and Community Choice Aggregators (CCAs) (collectively, the parties) submitted a proposed SST framework to fulfill 20 CCR § 1623(c)(1)-(2). This initiative is designed to not only meet regulatory requirements but also establish a robust, ongoing collaborative process. The goal is to develop a fully operational and cost-effective SST that delivers tangible benefits to California's electric customers while enhancing the overall efficiency and reliability of the state's electricity grid. By fostering collaboration among

stakeholders, the SST framework seeks to integrate innovative technologies and best practices, ensuring a sustainable energy future for California. LADWP anticipates creating a mechanism to interface with the SST that will provide other eligible RINs for its customers, until such time as LADWP has a rate or bill calculation tool.

On November 18, 2024, the CEC filed "Request for Comment on the Load Serving Entities' October 1, 2024, Plan for a Single Statewide Rate Access Tool". This document solicited comments on the Load Serving Entities' October 1, 2024, Plan for a Single Statewide Rate Access Tool. The document stated that CEC staff would review and consider all comments in planning next steps for the design and implementation of a statewide rate tool.

On January 17, 2025, LADWP filed responsive comments for the areas of "Design", "Authentication, customer authorization, privacy and security", and "Terms and conditions".

As of the date of this writing, LADWP is not aware of any further updates from the CEC on this matter in accordance with 20 CCR § 1623(c)(3).

5. Development of marginal cost-based rates

LADWP previously highlighted technological feasibility challenges to the development of marginal cost-based rates. The following are updates on addressing these technical issues.

A. Advanced Metering Infrastructure (AMI)

LADWP has begun their full deployment of AMI meters as of September 2025. Currently, less than 1 percent of LADWP's 1.5 million residential and business customers have smart meters. LADWP is working on fully integrating these AMI meters with LADWP's enterprise systems, including the Outage Management System (OMS) and upcoming Customer Cloud System (CCS). CCS will deliver meter-to-cash solutions with the scale, agility, and security of a cloud-optimized customer platform and is expected to be completed by the end of 2028. OMS integration will bring AMI meter data to LADWP's distribution system operators for faster outage detection, enhanced fault/device analysis, faster power restoration, and improved customer experience. These integrations are crucial for implementing advanced rate structures, such as marginal real-time rates and bringing real-time grid visibility to LADWP's operations.

B. Communications Network Expansion

The real-time granularity adopted in the LMS would consume significantly more bandwidth than LADWP's current time-of-use (TOU) rates program. LADWP has an AMI communication network that has reached operational readiness and is being used for AMI deployment. The communication network and back-office equipment have been

designed to support 1.5 million endpoints and can be scaled beyond that, if needed. The communication network is a mesh network that becomes more resilient as nodes (such as AMI meters) are added and is expected to be completed with full deployment of 1.5 million electric meters. This project is still ongoing and would be a prerequisite to offering next-generation, future real-time rates.

The estimated cost for completing the first phase of AMI integrations (excluding smart meter procurement and mass deployment) is about \$95 million.

C. Data Analytics Tools

To assist with the design of the marginal cost-based real-time rates, advanced data analytics tools will be needed to analyze demand forecast, consumption, and revenue requirements, to set up the pricing properly and effectively, and to reflect dynamic market conditions. LADWP currently uses SAS (previously called "Statistical Analysis System") statistical software for data analytics and bill comparisons, SAS Energy Forecasting for demand forecasting, and SAS Visual Analytics for creating dashboards to interpret complex data sets, making it easier to understand consumption trends and pricing changes. LADWP is also looking into other advanced data analytics tools, such as Snowflake and Python based analytical solutions; once AMI meter data is available, these software tools will be instrumental in monitoring usage patterns and developing marginal cost-based real-time rates.

D. Distribution System Technology

Locational pricing requires incorporating location into price signal calculations and poses challenges. While LADWP is currently implementing its distribution automation plan, which includes installing line monitoring sensors and technology to remotely control capacitor banks, additional technologies are necessary to achieve the distribution-level granularity required to fully comply with the LMS. These technologies include intelligent field devices, control systems, communication systems, modeling tools, and the construction of an advanced distribution control center, which LADWP currently lacks. As a result, LADWP is carefully exploring the best approach to deploy these technologies, considering the rate impact associated with such significant capital expenditures. Extending this level of visibility would require substantial time, far exceeding the timeframe set forth in the LMS. The estimated timeline for LADWP's technology upgrades is broken into phases:

1. Sensor Installation and Distribution Automation - Estimated at 4 years.
2. Additional Technologies Deployment - Involves hardware and system integrations, requiring 3-4 years.
3. Advanced Distribution Control Center Construction - Projected to take 6-8 years.

4. Achieving Granularity and Compliance - Full deployment of distribution system technology expected within 8-10 years, considering current limitations and iterative implementation.

The total estimate is 8-10 years, subject to project specifics, resources, and regulatory factors.

6. Development of MIDAS-based hourly marginal signal programs

LADWP provides the following update on its ongoing efforts to develop Demand Response (DR) programs capable of automated response to MIDAS signals. This update outlines revised implementation timelines, planned program rollouts, and key actions taken to advance these initiatives.

A. Status of the RFP, Board Authorization, and Contract Finalization

LADWP has made significant progress on the multi-year procurement effort designed to deploy a modern Demand Response Management System (DRMS) and establish the next generation of DR programs that incorporate MIDAS signal functionality.

In April 2024, LADWP issued a comprehensive Request for Proposals (RFP), with proposals submitted in June 2024. A rigorous evaluation process followed that and included detailed technical reviews, data security assessments, and negotiations with proposers.

During the negotiations, several vendor exceptions related to contract terms, financial assurances, and integration requirements required additional time to resolve. LADWP determined that these steps were necessary to safeguard utility operations, comply with internal policies, and secure enforceable agreements for long-term DR program deployment.

On October 28, 2025, the Board of Water and Power Commissioners approved the proposed agreements with the selected vendors.

Following the Board's authorization, LADWP anticipates executing the contracts in the first quarter of 2026, with work beginning thereafter.

B. Updated Implementation Timeline and Program Rollout

In the prior year's filing, LADWP anticipated launching the Residential Managed Charging Program, the C&I Managed Charging Program, and the Smart Device Integration Program in 2025. Due to the extended contracting timeline described above, LADWP has updated its implementation timeline as follows:

Activity	Updated Timeline
Contract Execution & Vendor Onboarding	Q1 – Q2 2026
DRMS Integration and Platform Configuration	Q1 – Q4 2026
MIDAS Signal Integration & Testing	Q4 2026 – Q2 2027

These updated timelines continue to align with LADWP's long-term grid modernization strategy, LA100 objectives, and internal system planning efforts. The delay does not negatively affect LADWP's ability to meet the intent of the LMS. On the contrary, it helps ensure the program's successful implementation.

C. Continued Commitment to MIDAS Integration and System Readiness

LADWP maintains a strong commitment to integrating MIDAS capabilities into its upcoming DR programs. Over the past year, LADWP has:

- Identified reserve margin and net power for load (NPL) as viable signals and developed preliminary forecasting procedures for hourly uploads to MIDAS.
- Identified system architectures where managed charging and smart device participants may opt into automated MIDAS-response pathways once technical readiness is achieved.

LADWP will begin (when technically feasible) detailed integration testing with selected vendors to validate system interoperability, performance, and automated response capabilities.

D. Technological Feasibility and System Development Progress

LADWP has made meaningful strides in advancing the technical framework necessary for a full-scale and systemwide automated MIDAS response even though the technological AMI deployment constraint remains. Over the past year, LADWP has:

- Reviewed managed charging program models from leading utilities (e.g., SMUD, SDG&E, and PG&E) to identify best practices.
- Completed scope and feasibility analysis for initial MIDAS capable programs.

LADWP concludes that, although a full-scale, automated MIDAS program for all

customers is not yet technologically feasible, the planned deployments in 2027 will generate valuable data and operational insights to guide a phased approach.

E. Grid and Operational Benefits Expected from Program Deployment

LADWP's existing DR programs have already demonstrated significant grid reliability value during recent high-demand periods, including multi-day DR activations during the heat waves of summers of 2022 and 2024. The upcoming MIDAS-integrated programs are expected to enhance system flexibility by:

- Reducing peak load by shifting EV charging and smart device operation to off-peak hours.
- Stabilizing grid operations by avoiding simultaneous EV demand during constrained periods.
- Maximizing renewable integration by aligning charging and smart device use with periods of high solar and renewable generation.

These benefits directly contribute to the statewide load management objectives outlined in the LMS as well as LADWP's broader system planning goals.

F. Customer Benefits and Program Value Proposition

LADWP's DR initiatives continue to deliver financial value to customers. Since 2020, more than \$15 million in incentives have been distributed to Power Savers Program participants. The upcoming revised and new programs are expected to expand these benefits through:

- Tiered incentive structures tied to MIDAS-indicated grid conditions
- Enhanced customer control over charging preferences
- Options for both telematics-enabled EVs and electric vehicle supply equipment based participation
- Smart device participation opportunities to reduce household energy costs

LADWP will continue to design incentives that are supportive of customer energy management choices.

G. Conclusion and Forward-Looking Commitment

LADWP remains committed to developing and deploying MIDAS-capable DR programs that align with the LMS, support grid reliability, and provide customer value. Although the program launch has shifted due to necessary contract negotiations, LADWP has made substantial progress on procurement, system readiness, and foundational design work.