

DOCKETED	
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Project Title:	Load Management Standards Implementation
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Document Title:	Los Angeles Department of Water and Power Load Management Standards Compliance Plan
Description:	Los Angeles Department of Water and Power Load Management Standards Compliance Plan
Filer:	Jordi Alejandro Burbano
Organization:	Los Angeles Department of Water and Power
Submitter Role:	Public Agency
Submission Date:	12/14/2023 4:27:07 PM
Docketed Date:	12/14/2023

December 13, 2023

Mr. Drew Bohan
Executive Director
Energy Data and Analytics Office
California Energy Commission
1516 Ninth Street
Sacramento, California 95814

Dear Mr. Bohan:

Subject: Submission of LADWP's Board-Adopted Load Management Standards Compliance Plan to the CEC Executive Director Pursuant to California Code of Regulations, Title 20, Division 2, Chapter 4, Article 5, Section 1623.1(a)(3)(A)

Under California Code of Regulations, Title 20, Division 2, Chapter 4, Article 5, Section 1623.1 Large POU and Large CCA Requirements for Load Management Standards, Subsection (a)(3)(A):

Within thirty (30) days after adoption of a plan or material plan revision pursuant to this subdivision, each large POU and Large CCA shall submit its plan to comply with the requirements of this Section 1623.1 or material plan revision to the Executive Director.

The City of Los Angeles Board of Water and Power Commissioners adopted LADWP's Load Management Standards Compliance Plan during its meeting held on November 14, 2023.

Enclosed is the Los Angeles Department of Water and Power's (LADWP) submittal of its **Load Management Standards Compliance Plan**, **LADWP Board Resolution**, and **LADWP Board Informational Letter**.

If you have any questions, or additional information is required, please contact me at (213) 367-4631 or Rockeish Mckenzie at (213) 367-4341.

Sincerely,

Bassam R.

Abou-Chakra

Digitally signed by Bassam
R. Abou-Chakra
Date: 2023.12.14 14:27:09
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Bassam Abou-Chakra, Chief Compliance Officer
Regulatory Compliance

TC:tc

Enclosures



RESOLUTION NO. _____

BOARD LETTER APPROVAL

Ann M. Santilli

Ann M. Santilli (Nov 1, 2023 14:52 PDT)

ANN M. SANTILLI
Chief Financial Officer

A handwritten signature in black ink, appearing to read 'M. Adams'.

MARTIN L. ADAMS
General Manager and Chief Engineer

DATE: October 25, 2023

SUBJECT: Load Management Standards Compliance Plan

SUMMARY

LADWP requests approval of the attached Resolution to adopt LADWP’s Load Management Standards Compliance Plan required under the California Code of Regulations (CCR) Title 20, Chapter 4, Article 5, §§ 1621, 1623, and 1623.1 (Load Management Standards).

LADWP understands the goals of the Load Management Standards, as stated in CCR §1623.1(a)(1), which are “encouraging the use of electrical energy at off-peak hours, encouraging the control of daily and seasonal peak loads to improve electric system efficiency and reliability, lessening or delaying the need for new electrical capacity, and reducing fossil fuel consumption and greenhouse gas emissions.” However, hourly or sub-hourly rates, as contemplated by the Load Management Standards, are not standard for utility customers presently for a variety of reasons, including cost, technical difficulties to implement, and customers’ avoidance of price risk. LADWP recognizes that someday, ideally, the use of time-based price signals could potentially prove to be invaluable in achieving the desired load management, particularly for customers who can automate management of their end-use consumption.

Additionally, enabling customers to automate end-use load management would require that LADWP offer a robust load management framework. As a Publicly Owned Utility (POU), LADWP strives to develop its load management framework but is constrained by current and future rate-setting policies, financial considerations, and limitations on infrastructure and other resources required to develop said framework. In reviewing its load management framework, LADWP assesses that implementing desired load management features within some of the specified timeframes required by the State of California Energy Commission (CEC) is not feasible. Specifically, compliance with the development of marginal-cost based rates, as defined in the Load Management Standards, for LADWP customers should be delayed until such time as implementing

such rates would be technologically feasible and equitable. Further, compliance with the development of programs that enable automated response to marginal cost signals or other signals from the CEC's MIDAS database should be delayed until such time as implementing such programs would be technologically feasible and can be done without potential reductions to system reliability or efficiency.

City Council approval is not required.

RECOMMENDATION

It is recommended that the Board of Water and Power Commissioners (Board) adopt the attached Resolution adopting the Load Management Standards Compliance Plan and making associated findings.

ALTERNATIVES CONSIDERED

No alternatives were considered. Adoption and submission of a Load Management Standards Compliance Plan is required by State of California (State) law and demonstrates LADWP's commitment to lowering the long-term economic and environmental costs of meeting the State's electricity needs.

FINANCIAL INFORMATION

Adoption of the Load Management Standards Compliance Plan is for regulatory compliance and does not represent an approval of rates or budget; however, future budget and rate actions may be required to meet the Load Management Standards. Any future budget and rates will need to be adopted by the Board.

BACKGROUND

In 2019, the CEC instituted a rulemaking proceeding (CEC Docket No. 19-OIR-01) to consider amendments to the load management regulations authorized under California Public Resources Code (PRC) Section 25403.5, which are Title 20, Sections 1621 to 1625. In 2021, a new docket (CEC Docket No. 21-OIR-03) was opened for this rulemaking. The rulemaking was initially directed at the three largest Investor Owned Utilities (IOUs) and two largest POUs, including LADWP, that provide retail electric service in the State. Ultimately, the rulemaking would also include Large Community Choice Aggregators (CCAs). Essentially, the rulemaking is based upon the premise that State electricity users will use smart devices to reduce or shift their electric loads in response to price or other signals. LADWP actively worked with the CEC, other utilities, and other stakeholders to provide input and comments on the various proposed regulations during the rulemaking, and emphasized to the CEC the unique situation of LADWP, helping to shape the final approved load management regulations. The final regulations are set forth in California Code of Regulations (CCR) Title 20, Chapter 4, Article 5, §§ 1621, 1623, and 1623.1 and are provided as Appendix 1 in LADWP's Compliance Plan.

According to CCR § 1621, the Load Management Standards “establish cost-effective programs and rate structures which will encourage the use of electrical energy at off-peak hours and encourage the control of daily and seasonal peak loads to improve electric system equity, efficiency, and reliability, lessen or delay the need for new electrical capacity, and reduce fossil fuel consumption and greenhouse gas emissions, thereby lowering the long-term economic and environmental costs of meeting the State's electricity needs.” A primary objective of the Load Management Standards is for the affected utilities and CCAs to implement marginal cost-based real-time (one hour or less) rates for each customer class or programs that enable automated response to marginal cost signal(s) for each customer class by April 1, 2026. The affected POU's are LADWP and the Sacramento Municipal Utility District (SMUD). The affected IOU's are Pacific Gas and Electric (PG&E), Southern California Edison (SCE), and San Diego Gas and Electric (SDG&E). The IOU's have different applicable Load Management Standards than do the POU's and the CCAs, basically due to the CEC's recognition that the governing bodies of the POU's and the CCAs should play the central role in establishing those entities' compliance plans for the Load Management Standards. Under the Load Management Standards, the initial compliance plan of a POU was required to be submitted to its rate-approving body by October 1, 2023, for adoption in a duly noted public meeting to be held within 60 days after the plan is submitted. The Board is named as such a body for LADWP in the regulation. LADWP submitted its initial compliance plan to the Board on September 29, 2023.

LADWP's Compliance Plan is based upon the CEC's compliance plan guide outline. As the compliance plan indicates, LADWP remains fully committed to supporting the CEC's objective to promote California's leadership toward a 100 percent clean energy future and addressing climate change. In pursuing its renewable objectives, LADWP recognizes the opportunities as well as the unique challenges presented by the integration of renewable resources into its grid.

As noted above, hourly or sub-hourly rates, as contemplated by the Load Management Standards, are not standard for utility customers presently for a variety of reasons, including cost, technical difficulties to implement, and customers' avoidance of price risk. Additionally, enabling customers to automate end-use load management would require that LADWP offer a robust load management framework, but LADWP's ability to develop said framework is constrained. LADWP assesses that implementing desired load management features within some of the specified timeframes required by the CEC is not feasible. Specifically, compliance with the development of marginal-cost based rates, as defined in the Load Management Standards, for LADWP customers should be delayed until such time as implementing such rates would be technologically feasible and equitable. Further, compliance with the development of programs that enable automated response to marginal cost signals or other signals from the CEC's MIDAS database should be delayed until such time as implementing such programs would be technologically feasible and can be done without potential reductions to system reliability or efficiency.

ENVIRONMENTAL DETERMINATION

Determine item is exempt pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15060(c)(3). In accordance with this section, an activity is not subject to CEQA if it does not meet the definition of a project. Section 15378(b)(5) states that organizational or administrative activities that will not result in direct or indirect physical changes in the environment do not meet that definition. Therefore, adoption of the LADWP's Load Management Standards Compliance Plan is not subject to CEQA.

CITY ATTORNEY

The Office of the City Attorney reviewed and approved the Resolution as to form and legality.

ATTACHMENTS

- Resolution
- LADWP's Load Management Standards Compliance Plan

RESOLUTION NO. _____

WHEREAS, the Los Angeles Department of Water and Power (LADWP) provides water and power services to over four million people in the City of Los Angeles; and

WHEREAS, LADWP is committed to providing its customers with reliable and sustainable power in a customer-focused and environmentally responsible manner; and

WHEREAS, California Code of Regulations (CCR) Title 20, Chapter 4, Article 5, §§ 1621, 1623, and 1623.1 contain new Load Management Standards (LMS) applicable to LADWP and required LADWP to submit a Compliance Plan to the Board of Water and Power Commissioners (Board) by October 1, 2023, which was done on September 29, 2023; and

WHEREAS, the LMS require the Board to hold a duly noticed public meeting for adoption of the LMS Compliance Plan within 60 days of the plan's submission to the Board; and

WHEREAS, the goals of the LMS are to encourage the use of electrical energy at off-peak hours, encourage the control of daily and seasonal peak loads to improve electric system equity, efficiency, and reliability, lessen or delay the need for new electrical capacity, and reduce fossil fuel consumption and greenhouse gas emissions; and

WHEREAS, LADWP is required to review its LMS Compliance Plan every three years and may need to update it sooner if there are material changes to the factors to be considered by the plan; and

WHEREAS, on November 14, 2023, the Board held a duly noticed public meeting for adoption of the LMS Compliance Plan; and

WHEREAS, under CCR § 1623.1(a)(2), the Board may approve a compliance plan, or material revisions to a previously approved plan, that delays compliance or modifies compliance with the requirements stated in the LMS under certain conditions.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby adopts the LMS Compliance Plan dated October 2023, a copy of which is on file with the Secretary of the Board.

BE IT FURTHER RESOLVED that, in accordance with CCR § 1623.1(a)(2), the Board finds that compliance with the development of marginal-cost based rates, as defined in the LMS, for LADWP customers should be delayed until such time as implementing such rates would be technologically feasible and equitable.

BE IT FURTHER RESOLVED that, in accordance with CCR § 1623.1(a)(2), compliance with the development of programs that enable automated response to marginal cost signals or other signals from the MIDAS database of the State of California Energy

Commission (CEC) should be delayed until such time as implementing such programs would be technologically feasible and can be done without potential reductions to system reliability or efficiency.

BE IT FURTHER RESOLVED that the Board has determined that the adoption of the LMS Compliance Plan is exempt from the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines Section 15060(c)(3).

BE IT FURTHER RESOLVED that LADWP shall submit its LMS Compliance Plan to the Executive Director of the CEC upon the time requirement as a final action of the Board.

I HEREBY CERTIFY that the foregoing is a full, true, and correct copy of a resolution adopted by the Board of Water and Power Commissioners of the City of Los Angeles at its meeting held on

Secretary

APPROVED AS TO FORM AND LEGALITY
HYDEE FELDSTEIN SOTO, CITY ATTORNEY

NOV 01 2023

BY Brian E. Stewart

BRIAN E. STEWART
DEPUTY CITY ATTORNEY

**LOAD MANAGEMENT STANDARDS REGULATIONS
COMPLIANCE PLAN**

LOS ANGELES DEPARTMENT OF WATER AND POWER



October 1, 2023

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- 4) Marginal cost rates evaluation
- 5) Evaluation of MIDAS-based hourly marginal signal programs

Appendices

1. Executive Summary

In 2019, the State of California Energy Commission (CEC) instituted a rulemaking proceeding (CEC Docket No. 19-OIR-01) to consider amendments to the load management regulations authorized under California Public Resources Code (PRC) Section 25403.5, which are Title 20, Sections 1621 to 1625. In 2021, a new docket (CEC Docket No. 21-OIR-03) was opened for this rulemaking. The rulemaking was initially directed at the three largest Investor Owned Utilities (IOUs) and two largest Publicly Owned Utilities (POUs), including the Los Angeles Department of Water and Power (LADWP), that provide retail electric service in the State of California (State). Ultimately, the rulemaking would also include Large Community Choice Aggregators (CCAs). Essentially, the rulemaking is based upon the premise that State electricity users will use smart devices to reduce or shift their electric loads in response to price or other signals. LADWP actively worked with the CEC, other utilities, and other stakeholders to provide input and comments on the various proposed regulations during the rulemaking, and emphasized to the CEC the unique situation of LADWP, helping to shape the final approved load management regulations. The final regulations are set forth in California Code of Regulations (CCR) Title 20, Chapter 4, Article 5, §§ 1621, 1623, and 1623.1 (the Load Management Standards) and are provided as Appendix 1.

According to CCR § 1621, the Load Management Standards “establish cost-effective programs and rate structures which will encourage the use of electrical energy at off-peak hours and encourage the control of daily and seasonal peak loads to improve electric system equity, efficiency, and reliability, lessen or delay the need for new electrical capacity, and reduce fossil fuel consumption and greenhouse gas emissions, thereby lowering the long-term economic and environmental costs of meeting the State's electricity needs.” A primary objective of the Load Management Standards is for the affected utilities and CCAs to implement marginal cost-based real-time (one hour or less) rates for each customer class or programs that enable automated response to marginal cost signal(s) for each customer class by April 1, 2026. The affected POUs are LADWP and the Sacramento Municipal Utility District (SMUD). The affected IOUs are Pacific Gas and Electric (PG&E), Southern California Edison (SCE), and San Diego Gas and Electric (SDG&E). The IOUs have different applicable Load Management Standards than do the POUs and the CCAs, basically due to the CEC’s recognition that the governing bodies of the POUs and the CCAs should play the central role in establishing those entities’ compliance plans for the Load Management Standards.

Under the Load Management Standards, the initial compliance plan of a POU is required to be submitted to its rate-approving body by October 1, 2023, for adoption in a duly noted public meeting to be held within 60 days after the plan is submitted. The Board of Water and Power Commissioners is named as such a body for LADWP in the

regulation. This document is prepared as LADWP's Load Management Standards compliance plan, based upon the CEC's compliance plan guide outline¹.

As this compliance plan indicates, LADWP remains fully committed to supporting the CEC's objective to promote California's leadership toward a 100 percent clean energy future and addressing climate change. In pursuing its renewable objectives, LADWP recognizes the opportunities as well as the unique challenges presented by the integration of renewable resources into its grid.

LADWP understands the CEC's goals, as stated in CCR §1623.1(a)(1), which are: "encouraging the use of electrical energy at off-peak hours, encouraging the control of daily and seasonal peak loads to improve electric system efficiency and reliability, lessening or delaying the need for new electrical capacity, and reducing fossil fuel consumption and greenhouse gas emissions." However, hourly rates are not standard for utility customers presently for a variety of reasons, including cost, technical difficulties to implement, and customers' avoidance of price risk. LADWP recognizes that someday, ideally, the use of time-based price signals could potentially prove to be invaluable in achieving this desired load management, particularly for customers who can automate management of their end-use consumption.

Enabling customers to automate end-use load management would require that LADWP offer a robust load management framework. As a POU, LADWP strives to develop its load management framework but is constrained by current and future rate-setting policies, financial considerations, and limitations on infrastructure and other resources required to develop said framework. In reviewing its load management framework, LADWP assesses that implementing desired load management features within some of the specified timeframes required by the CEC is not feasible.

LADWP's assessment of the feasibility of complying with the timeline set forth in the Load Management Standards is summarized as follows:

¹ CEC staff have outlined the form of a compliance plan in CEC document TN# 251054, "Compliance Assistance for Load Management Standards", 7/14/2023. LADWP's compliance plan is based upon this document, in particular the outline provided on pages 13-14.

Compliance Date	Load Management Standard	Requirement	Feasibility Yes or No
1-Apr-23		Effective Date of Load Management Standards.	NA
1-Apr-23	§ 1623.1(c)	Upload each time-dependent rate approved by the Board after this date to CEC's MIDAS database each time said rate is approved by the Board and each time said rate changes, prior to the effective date of said rate.	Yes
1-Jul-23	§ 1623.1(c)	Upload all existing time-dependent rates applicable to customers to CEC's MIDAS database.	Yes
1-Oct-23	§ 1623.1(a)(1)	Submit compliance plan to the Board for adoption in a duly noted public meeting to be held within 60 days after the plan is submitted.	Yes
1-Apr-24	§ 1623(c)(4)	Provide customers access to their Rate Identification Numbers (RINs) on customer billing statements and online accounts using both text and quick response (QR) or similar machine-readable digital code.	Yes
1-Oct-24	§ 1623(c)(2)	Develop single statewide RIN access tool with other utilities/CCAs. Submit RIN access tool to CEC for approval.	Yes
1-Oct-24	§ 1623.1(b)(3)	Submit list of load flexibility programs deemed cost-effective to CEC Executive Director.	Yes
1-Apr-25	§ 1623.1(b)(2)	Apply to the Board for approval of at least one marginal cost-based rate.	No
1-Apr-26	§ 1623.1(b)(4)	Offer to each electricity customer voluntary participation in either a marginal cost-based rate or a cost-effective program.	No
Annually	§ 1623.1(a)(3)(C)	Submit annual report of plan implementation to CEC Executive Director, starting on the 1-year anniversary of the initial Board approval per §1623.1(a)(2).	Yes
Triennially	§ 1623.1(a)(1)(C)	Review the plan at least once every three years after the plan is adopted. Submit a plan update to the Board where there is a material change to the factors considered per §§1623.1(a)(1)(A)-(B).	Yes
Event-Triggered	§ 1623.1(a)(3)(A)	Within 30 days after plan adoption or material plan revision, submit the plan or material plan revision to the CEC Executive Director.	Yes
Event-Triggered	§ 1623.1(a)(3)(B)	Respond to requests or recommendations within 90 days of receipt from the CEC Executive Director.	Yes

Under § 1623.1(a)(2) of the CCR, the rate-approving body of a Large POU or a Large CCA may approve a compliance plan, or material revisions to a previously approved plan, that delays compliance or modifies compliance with the requirements of Subsections 1623.1 (b)-(c), if the rate-approving body determines that the plan demonstrates any of the following:

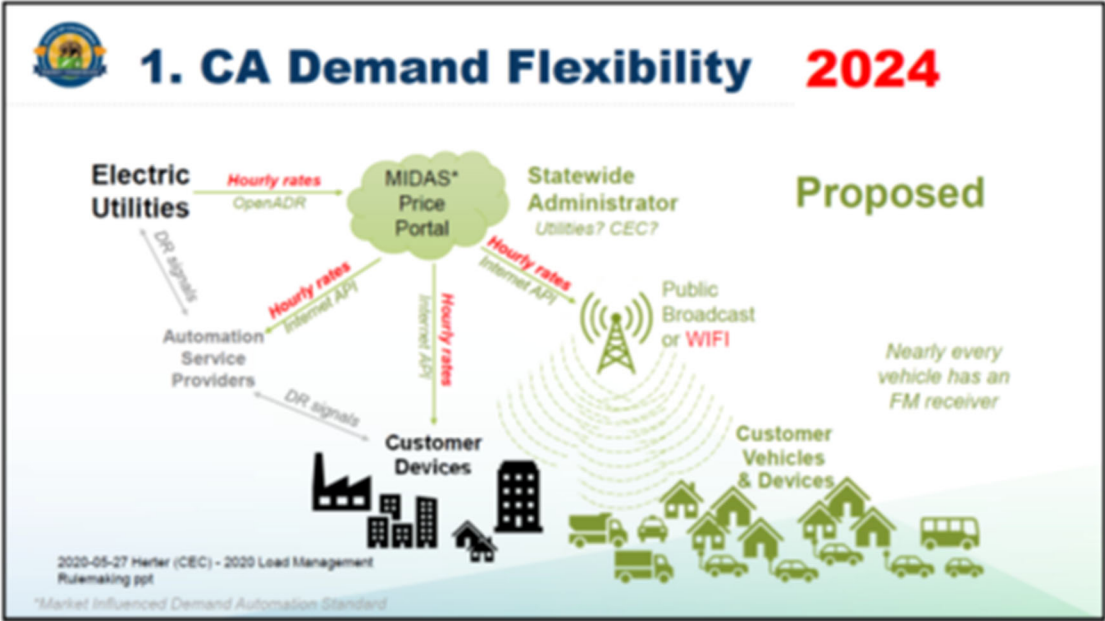
- (A) that despite a Large POU's or Large CCA's good faith efforts to comply, requiring timely compliance with the requirements of this article would result in extreme hardship to the Large POU or the Large CCA,
- (B) requiring timely compliance with the requirements of this article would result in reduced system reliability (e.g., equity or safety) or efficiency,
- (C) requiring timely compliance with the requirements of this article would not be technologically feasible or cost-effective for the Large POU to implement, or
- (D) that despite the Large POU's or the Large CCA's good faith efforts to implement its load management standard plan, the plan must be modified to provide a more technologically feasible, equitable, safe or cost-effective way to achieve the requirements of this article or the plan's goals.

This compliance plan includes the evaluation of equity, technological feasibility, and benefit to customers of implementing marginal cost-based rates. Consequently, LADWP finds that the implementation of marginal cost-based rates according to the timeline described in the Load Management Standards would result in extreme hardship to LADWP and is not technologically feasible. Therefore, in accordance with CCR § 1623.1(a)(2), compliance with the development of marginal-cost based rates for LADWP customers should be delayed until such time as implementing such rates would be technologically feasible and equitable.

This compliance plan includes the evaluation of technological feasibility and benefits to the grid of implementing programs that depend on MIDAS signals, in that it identifies potential reductions to system reliability or efficiency from implementing DR programs of this nature. Consequently, LADWP finds that the implementation of programs that enable automated response to marginal cost signals or other MIDAS signals according to the timeline described in the Load Management Standards would result in extreme hardship to LADWP, potentially reduce system reliability or efficiency, and is not technologically feasible. Therefore, in accordance with CCR § 1623.1(a)(2), compliance with the development of programs that enable automated response to marginal cost signals or other MIDAS signals should be delayed until such time as implementing such programs would be technologically feasible and can be done without potential reductions to system reliability or efficiency.

Background

The below diagram demonstrates the CEC’s vision for the Load Management Standards.



A key component of this vision is hourly rates. The hourly real-time prices would be transmitted to customers/customer smart Internet of Things (IoT) devices such that changes in the load in response to prices would decrease peak load through these devices acting by intelligent algorithm, termed demand flexibility by CEC. “This ... will help customers tailor their electricity use to save money, minimize greenhouse gas emissions from electricity production, improve the resilience of the electrical grid, and reduce the chance of planned and unplanned outages.”² Thus, the stated timeline in the Load Management Standards in the CCR would require LADWP to implement hourly real-time prices tariffs in the next few years.

The process of the Load Management Standards development started in 2019 with a rulemaking process. It ultimately resulted in amended CCR §§ 1621 and 1623 and a new § 1623.1. LADWP actively worked with the CEC, other utilities, and other stakeholders to provide input and comments on the various proposed regulations during the rulemaking, and emphasized to the CEC the unique situation of LADWP, helping to shape the final approved load management regulations.

² CEC document TN# 251054, “Compliance Assistance for Load Management Standards”, 7/14/2023, page 2.

From January 14, 2020, through CEC's adoption of the amended Load Management Standards during its October 12, 2022, Business Meeting, LADWP attended and participated in multiple meetings, including workshops, staff presentations and webinars, public hearings, and working group meetings.

In addition, from March 16, 2020, through September 27, 2022, LADWP contributed six comment letters to the CEC Load Management proceedings, expressing support for the intent of the proposed amendments, as well as conveying recommendations to alleviate potential concerns.

LADWP's comments expressed a wide range of concerns, including: jurisdictional concerns regarding CEC's enforcement authority and its potential encroachment on the authority of local governing boards; implementation concerns relating to Advanced Metering Infrastructure (AMI) deployment, communication network expansion, and distribution system technology; and additional concerns regarding customer equity, cost effectiveness, and the POU business model.

The adopted Load Management Standards successfully allayed several of LADWP's significant concerns by: recognizing the distinct governance and circumstances of POU's as compared to IOU's through the creation of parallel but distinct requirements for POU's in § 1623.1; allowing for the consideration of various factors, including technological feasibility, equity, and cost effectiveness, in evaluating potential compliance plans; recognizing the authority of local governing boards in adopting POU compliance plans; and allowing for flexibility in compliance, including through use of programs in place of rates and through allowing governing boards to approve delays or modifications to compliance.

As a critical component of the Load Management Standards, a compliance plan is required by the CCR that will need to be submitted to LADWP's rate-approving body, the LADWP Board of Water and Power Commissioners, by October 1, 2023, for adoption in a duly noticed public meeting to be held within 60 days after the plan is submitted.

As demonstrated by the Load Management Standards implementation timeline, there are complex, technical components applicable to LADWP to meet the CEC's Load Management Standards vision. CEC staff have outlined the form of a compliance plan in CEC's document TN# 251054, "Compliance Assistance for Load Management Standards", 7/14/2023. A summary of the required components includes:

1. Time-dependent rate submission to MIDAS via the MIDAS API
2. Plan to provide RIN(s) on customer billing statements and online account using both text and QR code
3. Plans and current participation in the development of a Single Statewide RIN Access Tool

4. Marginal cost rates evaluation. If the marginal cost rates evaluation leads to proposal of marginal cost rates development: item 5; if not, consider item 6
5. Marginal costs rate design and application plan
6. Description of MIDAS-based hourly marginal signal programs

This document is LADWP's compliance plan (CP) prepared based on CEC's Compliance Assistance for Load Management Standards Compliance Plan Submittals.

2. Load Management Standards Timeline

The Load Management Standards set forth the timeline for compliance shown below:

- ✚ **1-Apr-2023:** Effective Date of Load Management Standards
- ✚ **1-Apr-2023:** § 1623.1(c): Upload each time-dependent rate approved by the Board after this date to CEC's MIDAS database each time said rate is approved by the Board and each time said rate changes, prior to the effective date of said rate.
- ✚ **1-Jul-2023:** § 1623.1(c): Upload all existing time-dependent rates applicable to customers to CEC's MIDAS database.
- ✚ **1-Oct-2023:** § 1623.1(a)(1): Submit compliance plan to the Board for adoption in a duly noted public meeting to be held within 60 days after the plan is submitted.
- ✚ **1-Apr-2024:** § 1623(c)(4): Provide customers access to their Rate Identification Numbers (RINs) on customer billing statements and online accounts using both text and quick response (QR) or similar machine-readable digital code.
- ✚ **1-Oct-2024:** § 1623(c)(2): Develop single statewide RIN access tool with other utilities/CCAs. Submit RIN access tool to CEC for approval.
- ✚ **1-Oct-2024:** § 1623.1(b)(3): Submit list of load flexibility programs deemed cost-effective to CEC Executive Director.
- ✚ **1-Apr-2025:** § 1623.1(b)(2): Apply to the Board for approval of at least one marginal cost-based rate.
- ✚ **1-Apr-2026:** § 1623.1(b)(4): Offer to each electricity customer voluntary participation in either a marginal cost-based rate or a cost-effective program.
- ✚ **Annually:** § 1623.1(a)(3)(C): Submit annual report of plan implementation to CEC Executive Director, starting on the 1-year anniversary of the initial Board approval per § 1623.1(a)(2).
- ✚ **Triennially:** § 1623.1(a)(1)(C): Review the plan at least once every three years after the plan is adopted. Submit a plan update to the Board where there is a material change to the factors considered per §§ 1623.1(a)(1)(A)-(B).
- ✚ **Event-Triggered**
 - § 1623.1(a)(3)(A): Within 30 days after plan adoption or material plan revision, submit the plan or material plan revision to the CEC Executive Director.
 - § 1623.1(a)(3)(B): Respond to requests or recommendations within 90 days of receipt from the CEC Executive Director.

As described below, it is not possible for LADWP to follow the stated timeline for some aspects of the Load Management Standards.

3. Load Management Standards Key State of California Regulations

20 CCR 1623.1(a)(1)(A):

The [Load Management Standards compliance] plan must evaluate cost effectiveness, equity, technological feasibility, benefits to the grid, and benefits to customers of marginal cost-based rates for each customer class.

20 CCR 1623.1(a)(1)(B):

If after consideration of the factors in Subsection 1623.1(a)(1)(A) the plan does not propose development of marginal cost-based rates, the plan shall propose programs that enable automated response to marginal cost signal(s) for each customer class and evaluate them based on their cost-effectiveness, equity, technological feasibility, benefits to the grid, and benefits to customers.

20 CCR 1623.1(b):

Large POU and Large CCA Marginal Cost-Based Rates and Programs. Each Large POU and each Large CCA shall develop marginal cost-based rates or public programs structured according to the requirements of this article.

(1) Total marginal cost shall be calculated as the sum of the marginal energy cost, the marginal capacity cost (generation, transmission, and distribution), and any other appropriate time and location dependent marginal costs, including the locational marginal cost of associated greenhouse gas emissions, on a time interval of no more than one hour. cost computations shall reflect locational marginal cost pricing as determined by the associated balancing authority, such as the Los Angeles Department of Water and Power, the Balancing Authority of Northern California, or other balancing authority. Marginal capacity cost computations shall reflect the variations in the probability and value of system reliability of each component (generation, transmission, and distribution).

20 CCR 1623.1(a)(2):

The rate approving body of a Large POU or a Large CCA may approve a plan, or material revisions to a previously approved plan, that delays compliance or modifies compliance with the requirements of Subsections 1623.1 (b)-(c), if the rate approving body determines that the plan demonstrates any of the following:

(A) that despite a Large POU's or Large CCA's good faith efforts to comply, requiring timely compliance with the requirements of this article would result in extreme hardship to the Large POU or the Large CCA,

(B) requiring timely compliance with the requirements of this article would result in reduced system reliability (e.g., equity or safety) or efficiency,

(C) requiring timely compliance with the requirements of this article would not be technologically feasible or cost-effective for the Large POU to implement, or

(D) that despite the Large POU's or the Large CCA's good faith efforts to implement its load management standard plan, the plan must be modified to provide a more technologically feasible, equitable, safe or cost-effective way to achieve the requirements of this article or the plan's goals.

4. LADWP Load Management Standards Compliance Plan (CP)

As demonstrated by the above Load Management Standards implementation timeline, there are complex, technical components applicable to LADWP to meet the CEC's Load Management Standards vision.

§ 1623(b) Time-dependent rate submission to MIDAS via the MIDAS API

The Load Management Standards required California large utilities and CCAs, including LADWP, to upload all existing time-dependent rates applicable to customers to CEC's Market Informed Demand Automation Server (MIDAS) database by July 1, 2023.

In consultation with CEC staff, LADWP's Information Technology Services Division (ITSD) and Financial Services Organization (FSO) have reviewed LADWP's current electric rates and identified all applicable time-dependent rates. All rates were successfully uploaded, with exceptions noted, by July 1, 2023. Any rates with no customers have not been uploaded to MIDAS. LADWP will consider adding them to the upload if there are future sign-ups. Ultimately, with CEC staff input, LADWP uploaded time-dependent consumption-based rates, with the addition or subtraction of rate modifiers, such as adjustment factors to fund various projects and programs, discounts, and taxes.

As listed in the CEC staff compliance document TN# 251054:

1. a)
 - i. 40 standard and 243 contract rate variations have been uploaded in total. List of rate IDs is attached as Appendix 2. These were retrieved directly from the MIDAS API (<https://midasapi.energy.ca.gov/api/ValueData?signaltype=0>), and filtered for LADWP rates only (RIN prefix of 'USCA-LALA-').
 - ii. The rate download file for the R1B0 standard rate (excerpt) is attached as an example as Appendix 3. The rate download file is retrieved directly from the MIDAS API (<https://midasapi.energy.ca.gov/api/ValueData?ID=USCA-LALA-R1B0-0000&QueryType=alldata>).
 - iii. The composite rates for all 283 variations are calculated and provided in two CSV files used in the manual download process. Files are attached as Appendices 4 and 5 for reference. In general, the rate calculation is summarized as follows:

high peak/low peak/base period rate* + adjustment factors - discounts

*rate also depends on whether it is high low season

Applicable Rates

LADWP TOU rates include the following rates shown below, as well as any corresponding rates from another LADWP electric rate ordinance.

Rate	Description	Determinants
R1B	Residential Time-of-Use	kWh
A1B	Small General Service (4.8 kV or 34.5 kV system , kW below 30)	kWh
A2B	Primary General Service (4.8 kV System , 30 kW demand or greater)	kWh, kW, kVarh
A3A	Subtransmission Service (34.5 kV system , 30 kW demand or greater)	kWh, kW, kVarh
AMP	Port of LA Alternative Maritime Power	kwh for unmetered kvarh customers
AMPB	Port of LA Alternative Maritime Power (7 MW demand or greater)	kwh for unmetered kvarh customers
XRT2	Experimental Real-Time Pricing Service, Primary Service 4.8 kV, 250 kW demand or greater	kWh, kW, kVarh
XRT3	Experimental Real-Time Pricing Service, Subtransmission Service 34.5 kV, 250 kW demand or greater	kWh, kW, kVarh
XCD2	Experimental Contract Demand Service, Primary Service 4.8 kV, avg kWh 500,000 or greater per month	kWh, kW, kVarh
XCD3	Experimental Contract Demand Service, Subtransmission Service 34.5kV, avg kWh 500,000 or greater per month	kWh, kW, kVarh
CG2A	Cogeneration, Primary Service 4.8 kV	kWh, kW, kVarh, Backup kWh
CG3A	Cogeneration, Subtransmission Service 34.5 kV	kWh, kW, kVarh, Backup kWh
XRT/XCD	Combo XRT and XCD. Avg kWh 10,000,000 or greater per month or for cold storage customers	kWh, kW, kVarh
EVA1	Electric Vehicle contract rate (4.8 kV or 34.5 kV system , kW below 30)	kWh
EVA2	Electric Vehicle contract rate (4.8 kV System , 30 kW demand or greater)	kWh
EVA3	Electric Vehicle contract rate (4.8 kV or 34.5 kV system , kW below 30)	kWh

Rate Calculations

The CEC requires one number for kWh, kW, and kVarh for each TOU period. Adjustment factors must be added to each TOU base kWh rate factor as required.

LADWP's billing system, CC&B, has all of the factor tables for the base rates and adjustment factors for the standard rates: R1B, A1B, A2B, and A3A, which can be automatically extracted quarterly.

For PBS complex billing rates: AMP, XRT rates, XCD rates, all CG rates, XRT/XCD3, EVA rates, and EVB rates; the base rate numbers must be hard coded since these factors are not in CC&B; however, adjustment factors are the same as the standard rates and can be extracted automatically.

For R1B, the only residential rate included, the following adjustment factors must be added to kWh: ECA, ESA, RCA, IRCA kWh Residential, VEA, CRPSEA, and VRPSEA.

For all other rates, except the AMP rates, the following adjustment factors must be added to kWh: ECA, ESA, RCA, IRCA General Service, VEA, CRPSEA, and VRPSEA. No adjustment factors need to be added to the TOU kW and kVarh base rates.

For the CG rates, there is an additional Back-Up energy factor for kWh which CEC needs to add to their matrix. LADWP has communicated to CEC on this issue. No adjustment factors are added to this factor.

For the AMP and AMPB rates, only the unmetered kVarh rates are TOU, which is based on kWh determinants. No adjustment factors are added to this factor. All other factors are not time based for these two rates.

Upload to MIDAS will be performed on a quarterly basis due to some of the electric adjustment factors being adjusted on a quarterly basis.

The July 1, 2023, MIDAS upload was performed using a manual process. The automated process (INT072) is currently in development with 70% completion; full implementation is expected to be ready soon.

After the July 1, 2023, MIDAS upload, there was a discussion between LADWP and CEC staff about whether taxes should be included in the upload. LADWP provided the relevant taxes information to CEC staff for review. On September 8, 2023, CEC staff clarified that these taxes should be included in the upload.

The addition of the tax variations has multiplied LADWP rate variations from less than 300 RINs to 1,720 RINs. Therefore, LADWP has been working with its vendor Oracle to find a better way to store this RIN information on the customer billing system, and a potential solution has been found. It is anticipated that all taxes will be included in LADWP's January 1, 2024, upload and subsequent uploads.

§ 1623(c)(4) Plan to provide RIN(s) on customer billing statements and online account using both text and QR code

The Load Management Standards amendments (LMS) require California's large utilities and CCAs to upload their time-dependent rates to the CEC's MIDAS, provide customers RINs, and jointly develop a RIN access tool so third parties can assist customers in checking or changing the rate enrollment with the customers' authorization. Further, by April 1, 2024, they shall provide customers access to their RIN(s) on customer billing statements and online accounts using both text and quick response (QR) or similar machine-readable digital code.

LADWP Implementation Plan for Access to RINs

1.1. Objective

This implementation plan is to provide an overview of tasks and timelines required to place RINs on customer statements and online account using both text and QR code.

1.2. Implementation Outline

Major activities

1. Store RINs and Rate Variants in Billing System (CC&B)
2. Modify Billing Process to include the associated RINs when Customer Statements are generated.
3. Modify Customer Statements to include RINs in both text and QR code format.
4. Prepare Webpage to display RINs and rates information for customers' reference.

1.3. Proposed Timeline

The deadline for compliance is April 1, 2024. The RINs implementation requires engagement and coordination of various LADWP business units, including Information Technology Services Division, Customer Service Division, Financial Services Organization, and Customer Communication Group as there will be impacts in relation to customer bills change, display of rate information, organizational readiness, and other areas.

It is also important to evaluate the RINs implementation timeline in conjunction with LADWP's overall IT strategies, initiatives, and timeframes as part of the IT prioritization process.

LADWP plans to comply with the April 1, 2024, deadline required by the Load Management Standards and will monitor the progress. The table below presents the proposed RINs implementation timeline.

Task#	Task	Owner	Resource	2023				2024		
				Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March
1	Gather functional requirements	ITSD	ITSD							
2	Finalize Technical Design	ITSD	ITSD							
3	Build and Store RINs and Rate Variants in Billing System (CC&B)	ITSD	ITSD							
4	Modify Billing Process to include the associated RINs when Customer Statements are generated.	ITSD	ITSD							
5	Modify Customer Statements to include RINs in both text and QR code format.	ITSD and Customer Service Division	ITSD and Customer Service Division							
6	Prepare Webpage to display RINs and rates information for customers' reference.	Customer Communications	Customer Communications, Customer Service Division, ITSD							
7	Testing and Organization Readiness	ITSD and Customer Service Division	ITSD and Customer Service Division							
8	Roll out and validation	Customer Communications, Customer Service Division, ITSD	Customer Communications, Customer Service Division, ITSD							

Potential Issues with Providing RINs to Customers

LADWP will be able to provide the RINs to customers on rates R1B, A1B, AMP, AMPB, and all EVA rates. However, for the rates that include kVarh factors, the kVarh rates are based on the power factor for each individual customer. Power factor must be calculated at the end of the billing period. If the customer calculates their power factor in the middle of the billing period, it may change by the end of the month, so the rates may not be accurate at the time the customer checks MIDAS. Power factor is calculated as the square root of $(HP \text{ kwh} / (HP \text{ kwh}^2 + HP \text{ kvarh}^2))$. Because the power factor is calculated at the end of the billing period, it would be impossible to provide the RIN on the customer's bill. HP means High Peak.

The same is true for all XCD rates, which are based on load factors for each individual customer. The load factor must be calculated at the end of the billing period. If the customer calculates their load factor in the middle of the billing period, it may change by the end of the month, so the rates may not be accurate at the time the customer checks MIDAS. Load factor is calculated as $\text{Total kwh} / (\text{HP kW} * \text{number of days in billing period} * 24 \text{ hours})$. Because the load factor is calculated at the end of the billing period, it would be impossible to provide the RIN on the customer's bill.

§ 1623(c)(1)-(3) Plans and current participation in the development of Single Statewide RIN Access Tool

The Load Management Standards require IOUs, POUs, and CCAs to jointly develop a single statewide rate tool for authorized rate data access by third parties that is compatible with each of those entities' systems, for submission to the CEC by October 1, 2024, for approval at a CEC Business Meeting.

SCE, PG&E, SDG&E, and California CCAs volunteered for the leadership team of the utility working group. LADWP is participating in this process; representatives from ITSD and FSO have been designated, and their names have been provided to the CEC and utility leadership team. On September 20, 2023, representatives from the Large IOUs, Large POUs, and Large CCAs held an initial meeting to discuss the timeline and requirements for the Single Statewide RIN Access Tool. LADWP will work with the utility group to evaluate the funding and infrastructure need and develop a feasible LADWP implementation plan.

On September 15, 2023, CEC staff opined that the public and CEC need transparency in the RIN tool development to be able to track progress and provide appropriate input on the design and implementation of the single statewide rate lookup tool. To further these goals, CEC staff request the affected utilities and CCAs to post plans, schedules,

and monthly status reports on the progress of the single statewide rate access tool design and development to the LMS implementation docket 23-LMS-01 until such time as the tool is fully implemented and publicly available. A single status report submission from multiple regulated parties is allowed.

§ 1623.1(a)(1)(A) Marginal cost rates evaluation

CEC Load Management Standards Marginal Cost Rates Requirement

According to CCR § 1623.1(b)(1), each large POU and large CCA shall develop marginal cost-based rates. The detailed description of the marginal cost-based rates and timeline are as follows:

“(1) Total marginal cost shall be calculated as the sum of the marginal energy cost, the marginal capacity cost (generation, transmission, and distribution), and any other appropriate time and location dependent marginal costs, including the locational marginal cost of associated greenhouse gas emissions, on a time interval of no more than one hour. Energy cost computations shall reflect locational marginal cost pricing as determined by the associated balancing authority, such as the Los Angeles Department of Water and Power, the Balancing Authority of Northern California, or other balancing authority. Marginal capacity cost computations shall reflect the variations in the probability and value of system reliability of each component (generation, transmission, and distribution).”

“(2) Within two (2) years of April 1, 2023, each Large POU, and within twenty-seven (27) months of April 1, 2023, each Large CCA, shall apply to its rate-approving body for approval of at least one marginal cost-based rate, that meets the requirements of Subsection 1623.1(b)(1). Large CCAs may apply for approval of marginal cost-based rates that are offered by the Large IOUs in whose service areas the Large CCAs exist in.

(A) Large POUs and Large CCAs shall apply for approval of marginal cost-based rates only for those customer classes for which the rate-approving body determines such a rate will materially reduce peak load.”

“(4) Within three (3) years of April 1, 2023, each Large POU, and within fifty-one (51) months of April 1, 2023, each Large CCA, shall offer to each of its electricity customers voluntary participation in either a marginal cost-based rate developed according to Subsection 1623.1(b)(2), if such rate is approved by the Large POU's or Large CCA's rate-approving body, or a cost-effective program identified according to Subsection 1623.1(b)(3).”

LADWP Challenges to Meet the Stated Timeline to Implement the Marginal Cost Rates Requirement

Since the Load Management Standards development process started in 2019, LADWP actively worked with the CEC, other utilities, and other stakeholders to provide input and comments on the various proposed regulations during the rulemaking, and emphasized to the CEC the unique situation of LADWP, helping to shape the final approved load management regulations.

LADWP has submitted multiple comment letters to the CEC from March 2020 through September 2022, expressing support for the intent of the proposed load management regulations, as well as challenges that LADWP is facing.

On March 16, 2020, LADWP submitted the following comments on the draft load management regulations with regard to LADWP's existing challenges in implementing real-time marginal cost-based tariffs. Even though progress has been made in certain areas since the time of that submittal, these same challenges essentially remain for LADWP.

A. INFRASTRUCTURE CHALLENGES

To enable real-time load management as proposed in the [Standard] requires subject utilities to provide end users with a supportive framework:

- *Advanced Metering Infrastructure (AMI) meters, or “smart meters”, which serve as the user-side endpoint of the interface between utilities and end users;*
- *Communications networks that enable two-way communications between AMI meters and utility computer networks; and*
- *System architecture and field devices to provide increased granular visibility into the electrical distribution system.*

1. ADVANCED METERING INFRASTRUCTURE (AMI) DEPLOYMENT

LADWP has completed a pilot project that has led to the deployment of some AMI meters within its service territory. To date, approximately only 3.3 percent [currently about 5 percent] of LADWP's 1.5 million residential and business customers have smart meters. Challenges with the pilot project include the present and foreseeable future inability to fully integrate the deployed AMI meters into LADWP's billing system, which is an essential step for any rate structure, including real-time rates. The scale of AMI meter deployment and billing system upgrades required to fully implement real-time price signaling for all LADWP customers, or even specific sectors, would require a significant extension to the timeframes currently proposed in the Standard.

2. COMMUNICATIONS NETWORK EXPANSION

The real-time granularity as proposed in the Standard would consume significantly more bandwidth than LADWP's current time-of-use (TOU) program. LADWP has recently initiated a pilot project just to build the foundational infrastructure to support a limited number of endpoints. This project is still in its infancy and would be a prerequisite to offering next-generation, future real-time rates as part of a long-term project.

3. DISTRIBUTION SYSTEM TECHNOLOGY

[Locational pricing] presents challenges for factoring location into price signal calculation. To have distribution granularity would require LADWP to invest heavily in infrastructure upgrades, including intelligent field devices, control systems, communication systems, modeling tools, and the construction of an advanced distribution control center, which it currently does not have.

In addition, LADWP does not currently have sufficient distribution granularity for the level proposed in the Standard, and as a result the time required to extend this visibility would extend significantly beyond the timeframe proposed in the Standard.

B. CUSTOMER ADOPTION

The lack of a significant number of automated end devices available to respond to real-time pricing signals drastically limits the amount of load shifting benefit that can be gained. LADWP currently has limited participation in its Demand Response (DR) program...

C. CUSTOMER IMPACT

The financial impacts to customers in LADWP's service territory from being placed onto real-time rates are not yet known. Feasibility studies are necessary to assess the financial impact to customers' bills and to quantify the potential decrease in peak load in LADWP's service territory as a result of real-time rates. Furthermore, the impacts to low-usage, low-income, and Lifeline customers, in particular, need to be identified to ensure that LADWP can continue to provide fair and reasonable rates to all its customers. For example, significant infrastructure costs would be incurred to institute real-time rates, and those costs must be carefully assigned in the rate-design process.

D. POU BUSINESS MODEL

Vertically integrated POUs, such as LADWP, own nearly all of their generation capacity, by design. LADWP's cost of service includes all pre-planned and established generation, and LADWP's rates and financial planning are designed to match these generation costs. Real-time pricing cannot match the LADWP's cost of generation exactly all the time, so there will be cost differences. An issue that arises

is determining how these cost differences will be accounted for, and by whom. To resolve this, years ago, IOUs went through the transition to recover all of their generation costs, stranded costs over a period of ten years, and then implemented real-time pricing (direct access). For LADWP to allow its customers to participate in the real-time pricing market would require fee assessment onto all customers, which can be positive or negative depending on the costs, to rebalance the cost of service.

In summary, the Standard's proposed language could require LADWP to switch its business model dramatically, possibly with unintended consequences for customers. For example, allowing individual customers to effectively participate in the real-time pricing market shifts significant risk onto them, many of whom are already economically vulnerable. In fact, residential customers, particularly low-income customers, could potentially be most impacted since they may not have the necessary information, required equipment, or funding to benefit from the real-time energy market, and might, in effect, simply be penalized by it. In addition, LADWP's service territory is highly urbanized with a high percentage of renters who may not have access to automated end devices that can respond to real-time rates. Alternatively, LADWP as a whole could continue at this time to participate in the real-time market and pass the savings to all customers entirely, not individually.

Conclusion of Evaluation of Marginal Cost Rates

The foregoing list of challenges includes the evaluation of equity, technological feasibility, and benefit to customers. As described in the foregoing list, the implementation of marginal cost-based rates according to the timeline described in the Load Management Standards would result in extreme hardship to LADWP and is not technologically feasible. Therefore, in accordance with CCR § 1623.1(a)(2), compliance with the development of marginal-cost based rates for LADWP customers should be delayed until such time as implementing such rates would be technologically feasible and equitable. Even though LADWP has determined that implementation of marginal cost real-time rates under the stated Load Management Standards timeline is not feasible, LADWP will continue to address these challenges, actively look into options, and pursue Meter/IT/Billing infrastructure that can facilitate the Load Management Standards requirements. As part of these efforts, on July 3, 2023, LADWP created a new Advanced Technologies Infrastructure Division, and a Division Director has been appointed to better integrate LADWP power and water infrastructure. LADWP is aiming to start mass AMI meter deployment in mid-2024 for its 1.5+ million residential and business electric service customers.

LADWP will work with its Corporate Strategy and Communications Office to develop a public information program at such time that it chooses to adopt the real-time marginal cost-based rates as contemplated by the Load Management Standards.

§ 1623.1(a)(1)(B) Evaluation of MIDAS-based hourly marginal signal programs

LADWP has existing load management programs, and new programs will continue to be developed. However, to integrate MIDAS signals, LADWP will need more time to analyze and evaluate the implication on LADWP operations and to develop a plan to implement the integration of MIDAS signals.

LADWP Demand Response Programs Overview

The Demand Response (DR) Development team is currently managing two DR programs, the Commercial and Industrial (C&I) Program for commercial and industrial customers and the Power Savers Program (PSP) for residential and small business customers. The C&I Program was launched in 2015 with the support from a contractor. Starting in 2017, the in-house team fully managed the program. LADWP began offering PSP to the customers in 2020, and the program used the bring-your-own-thermostat (BYOT) approach. In addition to these existing programs, the DR team is working on a DR Request-for-Proposal (RFP), which will acquire a demand response management system (DRMS) and develop new programs leveraging electric vehicles (EVs), EV supply equipment (EVSE), Internet of Things (IoT) devices, and connected appliances. The RFP is scheduled to be published in Quarter 4 of 2023.

Existing Demand Response Programs^[SB1]

Commercial and Industrial Demand Response Program

LADWP currently offers incentives to commercial and industrial customers for committing reduction in their electricity usage when requested. When they sign up for the program, the prospective participants must agree to reduce 100 kW of demand and choose either 24-hour (day-ahead) notification or 2-hour (same-day) notification. The incentives, shown below, are based on their notification selection.

- Capacity Incentives:
 - o \$8/kW/month for 24-hour notification
 - o \$12/kW/month for 2-hour notification
- Energy Incentives:
 - o \$0.25/kWh for demand curtailment

The following are the program parameters for the C&I DR Program:

- Requires a minimum commitment of 100 kW of Load Reduction
- DR season is from June 15 through October 15
- Maximum 12 DR events per season
- DR events may take place between 1 p.m. to 6 p.m. on Weekdays
- Up to 4 hours per event
- No more than one event per day

These parameters may change in the future in accordance with LADWP’s need for peak load reduction. For this program, LADWP utilizes emails to dispatch the DR events to the participants and record the responses. In addition, the LADWP team uses MS Excel for measurement and verification (M&V) after each event and settlement at the end of the season.

More information on the C&I DR Program can be found on <http://www.ladwp.com/DRProgram>.

Program Years	2015	2016	2017	2018	2019	2020	2021	2022
Program Capacity	6	30	25	22	27	29	34	35
Number of Participants	28	34	40	43	50	49	58	63
Number of Events	5	4	7	5	3	8	3	9
Energy Saved (MWh)	112	485	522	447	443	658	377	1,177

Power Savers Program

The Power Savers Program is an energy saving smart thermostat program offered to residential and small-commercial LADWP customers. The program follows the “Bring Your Own Thermostat” model where customers are encouraged to enroll their own qualifying smart thermostat or encouraged to purchase a qualifying smart thermostat (primarily from LADWP’s Energy Product Marketplace). Customers will then receive a one-time rebate to compensate the “purchase” of their thermostat with a \$125 amazon gift card. A customer who remains enrolled during the duration of the season qualifies for the annual \$60 amazon gift card incentive. Customers enrolled in the program agree to have their thermostat temperature increased by 2-4 degrees (called an event) by LADWP any given time from 1-10 p.m., June 1 – October 31 (season time-frame), for at most 4 hours, and up to 20 events in the season.

More information on the Power Savers Program can be found on <http://www.ladwp.com/PowerSaversProgram>.

Years	2020	2021	2022
Program Capacity (MW)	12	23	28
Number of Devices	18,477	34,494	43,806
Number of Events	10	7	10
Energy Saved (MWh)	212	303	782

Planned Demand Response Programs

Electric Vehicle and Electric Vehicle Supply Equipment Managed Charging Program

Using the managed charging solution, LADWP will reduce, offset, or shift the load due to charging electric vehicles (EVs) during a specific time range. As a part of the program, the customers will enroll their EVs and EV supply equipment (EVSE or EV charger) into the program for the incentives provided by LADWP. In return, LADWP will schedule the charging of the EVs while ensuring the enrolled customers still meet their charging requirement. The information from vehicle telematics and EV chargers allows LADWP to monitor the state of charge in the vehicle and charging rate. This program will be launched in Q3 of 2024.

Internet of Things Device/Appliance Demand Response Program

As the drive for electrification grows in the City of Los Angeles, LADWP must find a way to manage the load growth from residences to maintain the reliability of the existing infrastructure. The IoT or smart device/appliance DR program will help LADWP with shifting the demand from these devices at residences to non-peak periods. The targeted technologies and devices include internet-connected water heaters, pool pumps, window/portable/split-type air-conditioning, battery energy storage at residences, plug loads, etc. This program will be launched in Q3 of 2024.

Implementation Plan

Upcoming Demand Response Request-for-Proposal

In Q4 of 2023, LADWP will release an RFP that will include scope for acquiring DRMS and DR program services for the existing and planned programs. LADWP will award up to nine contracts from this RFP. These contracts will help LADWP with streamlining DR processes and expanding the DR programs to meet the renewable goals.

Demand Response Management System

One of the aspects of the RFP is acquiring DRMS and integrating that system with LADWP's legacy systems, such as the Customer Information System, Geographic Information System, Automated Distribution Management System (ADMS), Meter Data Management System, etc. The integration would facilitate verifying enrollment information from the customers, dispatching DR resources, verifying the participating customers' performances, and processing incentives. DRMS is a crucial tool for scaling a DR program economically and allows processing of huge amounts of program data. DRMS is solely for the purpose of managing and automating the programs. Dispatch of DR resources will be housed in the Energy Control Center's Distributed Energy Resources Management System (DERMS) module of the ADMS.

Demand Response Program Barriers

Lack of AMI Meters

The measurement and verification (M&V) process is an important component of any DR programs because incentive and performance depend on it for the accuracy. Also, the M&V process requires accurate and timely interval meter data to be available. Currently, LADWP has automated meter read (AMR) meters, and these meters use either cellular connection or manual downloads for the data to be transmitted back to the LADWP server. Manual downloads can result in a lag of more than a month before the DR team receives the data for calculation. Without the AMI or smart meters, scaling DR programs to manage loads will be challenging.

Lack of Automation in DR Programs

Currently, DR resources from the C&I Program are dispatched via email and text messages. The Energy Control Center (ECC) does not have a direct control of these assets; therefore, verifying the customers' participation in a timely manner is difficult. To mitigate this issue, LADWP must integrate customers' building energy management systems (BEMSs) with the ECC's ADMS for dispatch and control. In addition to this integration, the DR team needs a DRMS to facilitate managing and automating C&I DR Program. Moreover, integration with MIDAS for DR purpose is impossible without DRMS.

Challenges in Operation

Integrating MIDAS signals will require revision of operating procedures, which dictate when and how a DR resource is dispatched. Currently, LADWP's ECC group holds the ultimate authority to dispatch DR resources in its service territory. Responding to a California Independent System Operator (CAISO) signal through MIDAS, for example, will require the ECC's inputs and approval. Since 2021, LADWP is participating in the Energy Imbalance Market (EIM), which requires LADWP to meet specific guidelines in forecasting and dispatching resources. If LADWP fails to meet EIM guidelines, LADWP will incur financial penalties. LADWP will need more time for the internal groups to discuss the implication on operation due to integrating MIDAS signals.

The foregoing analysis includes the evaluation of technological feasibility and benefits to the grid, in that it identifies potential reductions to system reliability or efficiency from implementing DR programs that depend on MIDAS signals without further analysis. Therefore, as described in the foregoing analysis, the implementation of programs that enable automated response to marginal cost signals or other MIDAS signals according to the timeline described in the Load Management Standards would result in extreme hardship to LADWP, potentially reduce system reliability or efficiency, and is not technologically feasible. Therefore, in accordance with CCR § 1623.1(a)(2), compliance with the development of programs that enable automated response to marginal cost

signals or other MIDAS signals should be delayed until such time as implementing such programs would be technologically feasible and can be done without potential reductions to system reliability or efficiency.

LADWP will work with its Corporate Strategy and Communications Office to develop a public information program at such time that it chooses to adopt load flexibility programs as contemplated by the Load Management Standards.

Appendix 1 – Load Management Standards

[Home Table of Contents](#)**§ 1621. General Provisions.**

20 CAADC § 1621

Barclays Official California Code of Regulations

Barclays California Code of Regulations
 Title 20. Public Utilities and Energy
 Division 2. State Energy Resources Conservation and Development Commission (Refs & Annos)
 Chapter 4. Energy Conservation
 Article 5. Load Management Standards

20 CCR § 1621

§ 1621. General Provisions.Currentness

(a) Purpose. This article establishes electric load management standards pursuant to Section 25403.5 of the Public Resources Code. These standards establish cost-effective programs and rate structures which will encourage the use of electrical energy at off-peak hours and encourage the control of daily and seasonal peak loads to improve electric system equity, efficiency, and reliability, lessen or delay the need for new electrical capacity, and reduce fossil fuel consumption and greenhouse gas emissions, thereby lowering the long-term economic and environmental costs of meeting the State's electricity needs. These load management standards do not set rates. The standards instead require that entities subject to this article offer rates or programs structured according to the requirements established herein.

(b) Application. Except as set forth below, each of the standards in this article applies to the following electric utilities: Los Angeles Department of Water and Power, San Diego Gas and Electric Company, Southern California Edison Company, Pacific Gas and Electric Company, and Sacramento Municipal Utility District. In addition, the standards set forth in subsections 1621 and 1623 of this article apply to any Large Community Choice Aggregators (CCA) operating within the service areas and receiving distribution services from the foregoing electric utilities. Large CCAs are not subject to subsections 1622, 1624, and 1625 of this article. Section 1621 subsections (d)-(g) and Section 1623 subsections (a), (b) and (d) do not apply to either the Los Angeles Department of Water and Power, the Sacramento Municipal Utility District or to the Large CCAs. The standards set forth in Section 1623.1 apply to the Los Angeles Department of Water and Power, the Sacramento Municipal Utility District and to the Large CCAs. The Commission has found these standards to be technologically feasible and cost-effective when compared with the costs for new electrical capacity for the above-named electric utilities, and Large CCAs operating within the service areas of such electric utilities.

(c) Definitions. In this article, the following definitions apply:

- (1) "Building type" means the classification of a non-residential building in accordance with California Code of Regulations, Title 24, Part 2, Chapter 3 of the California Building Code.
- (2) "Community choice aggregators" or "CCAs" means entities as defined in Public Utilities Code section 331.1.
- (3) "Central air conditioner" means any residential electric air conditioner which delivers cooled air through ducts to rooms.
- (4) "Commercial customers" means those customers of a utility or CCA who run any business described in Standard Industrial Classification Groups 40 through 86, and 89 through 99, and which do not treat sewage or manufacture goods or provide other process-oriented services.
 - (A) "Large commercial customers" are those businesses whose demand for electricity equals or exceeds 500 kilowatts.
 - (B) "Small commercial customers" are those businesses whose demand for electricity is less than 500 kilowatts.
- (5) "Conditioned Space" means an enclosed space within a building that is directly conditioned or indirectly conditioned, consistent with California Code of Regulations, Title 24, Part 6, section 100.1(b).
- (6) "Customer class" means a broad group of customers used for rate design. Customer classes include but are not limited to residential, commercial, industrial, and agricultural, but does not include street lighting. "Customer" or "customers" mean a customer or customers of a utility or Large CCA within a customer class.
- (7) "Greenhouse gas" or "GHG" has the same meaning as in California Code of Regulations, Title 17, section 95802.
- (8) "Large Investor-Owned Utilities" and "Large IOUs" mean the San Diego Gas and Electric Company, the Southern California Edison Company, and the Pacific Gas and Electric Company.
- (9) "Large Publicly-Owned Utilities" and "Large POUs" mean the Los Angeles Department of Water and Power and the Sacramento Municipal Utility District.
- (10) "Large Community Choice Aggregators" and "Large CCAs" mean the Clean Power Alliance of Southern California, East Bay Community Energy, Marin Clean Energy, Central Coast Community Energy, Silicon Valley Clean Energy Authority, San Jose Clean Energy, Peninsula Clean Energy Authority, Clean Power SF, Sonoma Clean Power Authority, San Diego Community Power, Pioneer Community Energy, Valley Clean Energy, and any community choice aggregator that provides in excess of 700 GWh of electricity to customers in any calendar year. For community

choice aggregators that become subject to these regulations after their effective date, the effective date of their compliance obligations shall be April 1 of the year after they exceed the 700 GWh threshold.

(11) "Load management tariff" means a tariff with time-dependent values that vary according to the time of day to encourage off-peak electricity use and reductions in peak electricity use.

(12) "Marginal cost" or "locational marginal cost" means the change in current and future electric system cost that is caused by a change in electricity supply and demand during a specified time interval at a specified location.

(13) "Rate Identification Number" or "RIN" means the unique identifier established by the Commission for an electricity rate.

(14) "Rate-approving body" means the California Public Utilities Commission in the case of investor-owned utilities, or the governing body of CCAs or publicly owned utilities. For purposes of this article, the Board of Water and Power Commissioners of the City of Los Angeles is the rate-approving body for the Los Angeles Department of Water and Power.

(15) "Residential" means any family dwelling within the utility's or CCA's service area which uses electricity for noncommercial purposes as defined in the utility's or CCA's terms and conditions of service.

(16) "Service area" means any contiguous geographic area serviced by the same electric utility or CCA.

(17) "Tariff" means a pricing schedule or rate plan that a utility or CCA offers to their customers specifying the components of the customer's electricity bill.

(18) "Time-dependent rate" means a rate that can vary depending on the time of day to encourage off-peak electricity use and reductions in peak electricity use. Time-of-use, hourly, and sub-hourly rates are time-dependent rates.

(19) "Time-of-use rate" means a rate with predefined prices that vary according to the time of day, the season, and/or the day type (weekday, weekend, or holiday).

(20) "Utility" means those electric utilities to which the sections of this article apply, as specified in subsection (b).

(21) "Water heater" means any residential electric water heater except those which provide hot water to heat space or those which operate within electric dishwashers.

(d) Large IOU Plans to Comply with Load Management Standards

(1) Each Large IOU shall submit a plan to comply with Sections 1621 and 1623 of this article to the Executive Director no later than six (6) months after April 1, 2023.

(2) The Executive Director shall review the plans and either return them to the Large IOU for revision or submit them to the Commission for review and potential approval. The Executive Director may recommend, and the Commission may approve, a submittal on condition that the Large IOU make specified changes or additions to the submittal, within a reasonable period of time set by the Commission. A conditionally-approved plan shall not become effective until the Large IOU makes the specified changes or additions to the submittal under review. The Commission shall approve submittals which are consistent with these regulations and which show a good faith effort to plan to meet program goals for the standards. In reviewing a plan, the Executive Director and the Commission may request additional information consistent with Sections 1621 and 1623.

(3) All proposed plan revisions must be submitted to the Executive Director for review. The Executive Director may approve plan revisions that do not affect compliance with the requirements of Sections 1621 or 1623. The Executive Director shall submit all other plan revisions to the Commission for approval.

(4) Large IOUs shall submit to the Executive Director annual reports demonstrating their implementation of plans approved pursuant to this section. The reports shall be submitted one year after plans are approved pursuant to subsection (2) and annually thereafter.

(e) Exemptions, Delays, or Modifications

(1) Large IOUs may apply to the Executive Director for an exemption from the requirements of Sections 1621 and 1623 of this article, to delay compliance with its requirements, or to modify a load management standard compliance plan. The Commission may, by resolution, order a Large IOU to modify its approved load management standard plan. Upon such order by the Commission, a Large IOU shall submit an application to modify its plan within 90 days of the Commission's order.

(2) Applications for exemptions or delays shall set forth the requested period during which the exemption or delay would apply and indicate when the Large IOU reasonably believes the exemption or delay will no longer be needed. The application further shall demonstrate one or more of the following:

(A) that despite a Large IOU's good faith efforts to comply, requiring timely compliance with the requirements of this article would result in extreme hardship to the Large IOU,

(B) requiring timely compliance with the requirements of this article would result in reduced system reliability (e.g., equity or safety) or efficiency, or

(C) requiring timely compliance with the requirements of this article would not be technologically feasible or cost-effective for the Large IOU to implement. Applications for exemptions or delays may be supported by proposing pilot programs that demonstrate how and when a Large IOU will come into compliance with the requirements of this article.

(3) Applications for modifications shall demonstrate that despite the Large IOU's good faith efforts to implement its load management standard plan, the plan must be modified to provide a more technologically feasible, equitable, safe or cost-effective way to achieve the requirements of this article or the plan's goals.

(4) The Executive Director shall review applications for exemptions, delays, and modifications and make an initial determination of whether an application demonstrates the requirements of either subsection (2) or (3) above. The Executive Director shall then submit the application to the

Commission with a recommendation of whether to approve or reject the application based on their initial determination. In reviewing these applications, the Executive Director and the Commission may request additional information or revisions of the application from a Large IOU consistent with Sections 1621 and 1623. If a Large IOU fails to provide information or revisions by a deadline established by the Executive Director or the Commission, the Commission may deny the application on that basis. The Commission may place conditions on its approval of plans or material plan revisions that are necessary to guarantee that the plan or plan revision will comply with Section 1621 and 1623 by a date certain.

(f) Enforcement. The Executive Director may, after reviewing the matter with the Large IOU, file a complaint with the Commission following the process set forth in Sections 1233.1 to 1233.4 or seek injunctive relief if a Large IOU:

- (1) Fails to adhere to its approved or conditionally approved load management standard plan,
- (2) Modifies its approved load management standard plan without approval,
- (3) Does not provide information by a deadline established by the Executive Director or the Commission, or
- (4) Violates the provisions of this article.

(g) Recovery of Program Costs

In its rate applications, each Large IOU shall seek to recover the full costs associated with conducting each program required by this article from the class of customers which the program most directly affects. The Large IOU shall not be required to commence implementation of any program required by this article until the Large IOU's rate-approving body has approved the tariffs which are a part of any such program and a method for recovering the costs of the program. This does not affect any obligations Large IOUs have under Section 1623(b).

Credits

NOTE: Authority cited: Sections 25213, 25218(e) and 25403.5, Public Resources Code. Reference: Sections 25132 and 25403.5, Public Resources Code.

HISTORY

1. New Article 5 (Sections 1621-1625) filed 6-8-79; effective thirtieth day thereafter (Register 79, No. 23).
2. Amendment of subsections (a), (b), (c)(9), (d) and (h)(3); new subsection (c)(10); and repealer of former subsection (j) filed 8-13-82; effective thirtieth day thereafter (Register 82, No. 33).
3. Amendment of section and NOTE filed 1-20-2023; operative 4-1-2023 (Register 2023, No. 3).

This database is current through 9/22/23 Register 2023, No. 38.

Cal. Admin. Code tit. 20, § 1621, 20 CA ADC § 1621

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[Home Table of Contents](#)**§ 1623. Load Management Tariff Standard.**

20 CAADC § 1623

Barclays Official California Code of Regulations

Barclays California Code of Regulations
 Title 20. Public Utilities and Energy
 Division 2. State Energy Resources Conservation and Development Commission (Refs & Annos)
 Chapter 4. Energy Conservation
 Article 5. Load Management Standards

20 CCR § 1623

§ 1623. Load Management Tariff Standard.Currentness

(a) Marginal Cost-Based Rates. This standard requires that each Large IOU develop marginal cost-based rates structured according to the requirements of this article and that the Large IOU submit such rates to its rate-approving body for approval.

(1) Total marginal cost shall be calculated as the sum of the marginal energy cost, the marginal capacity cost (generation, transmission, and distribution), and any other appropriate time and location dependent marginal costs, including the locational marginal cost of associated greenhouse gas emissions, on a time interval of no more than one hour. Energy cost computations shall reflect locational marginal cost pricing as determined by the associated balancing authority, such as the California Independent System Operator, the Balancing Authority of Northern California, or other balancing authority. Marginal capacity cost computations shall reflect the variations in the probability and value of system reliability of each component (generation, transmission, and distribution).

(2) Within twenty-one (21) months of April 1, 2023, each Large IOU shall apply to its rate-approving body for approval of at least one marginal cost-based rate, in accordance with 1623(a)(1), for each customer class.

(3) Large IOUs shall provide the Commission with informational copies of tariff applications when they are submitted to their rate-approving bodies.

(b) Publication of Machine-Readable Electricity Rates. No later than three (3) months after April 1, 2023, each Large IOU shall upload its existing time-dependent rates applicable to its customers to the Commission's Market Informed Demand Automation Server (MIDAS) database. Each Large IOU shall upload all time-dependent rates, including those approved after April 1, 2023, to MIDAS prior to the effective date of the time-dependent rates each time a time-dependent rate is approved by the rate-approving body and each time a time-dependent rate changes.

The time-dependent rates uploaded to the MIDAS database shall include all applicable time-dependent cost components, including, but not limited to, generation, distribution, and transmission. The Commission maintains public access to the MIDAS-database through an Application Programming Interface (API) that, provided a Rate Identification Number (RIN), returns information sufficient to enable automated response to marginal grid signals including price, emergency events, and greenhouse gas emissions.

(c) Support Customer Ability to Link Devices to Electricity Rates.

(1) Third-party Access. The Large IOUs, Large POU's and Large CCAs shall develop a single statewide standard tool for authorized rate data access by third parties that is compatible with each of those entities' systems. The tool shall:

(A) Provide the RIN(s) applicable to the customer's premise(s) to third parties authorized and selected by the customer;

(B) Provide any RINs, to which the customer is eligible to be switched, to third parties authorized and selected by the customer;

(C) Provide estimated average or annual bill amount(s) based on the customer's current rate and any other eligible rate(s) if the Large IOU, Large POU or Large CCA has an existing rate calculation tool and the customer is eligible for multiple rates;

(D) Enable the authorized third party to, upon the direction and consent of the customer, modify the customer's applicable rate to be reflected in the next billing cycle according to the Large IOU's, Large POU's or Large CCA's standard procedures;

(E) Incorporate reasonable and applicable cybersecurity measures;

(F) Minimize enrollment barriers; and

(G) Be accessible in a digital, machine-readable format according to best practices and standards.

(2) The Large IOUs, Large POU's and Large CCAs shall submit the single statewide standard tool developed pursuant to Section 1623(c)(1) to the Commission for approval at a Business Meeting.

(A) The tool must be submitted within eighteen (18) months of April 1, 2023.

(B) The Executive Director may extend this deadline upon a showing of good cause.

(C) The Large IOUs, Large POUs and Large CCAs shall describe a single set of terms and conditions they intend to require of third parties using the single statewide standard tool.

(3) Upon Commission approval the Large IOUs, Large POUs and Large CCAs shall implement and maintain the tool developed in Section 1623(c)(1).

(4) Customer Access. No later than one (1) year after April 1, 2023, each Large IOU, Large POU and Large CCA shall provide customers access to their RIN(s) on customer billing statements and online accounts using both text and quick response (QR) or similar machine-readable digital code.

(5) Any changes to the single statewide standard tool, including changes to the terms and conditions, shall be submitted to the Executive Director for approval. The Executive Director shall submit any substantive changes to the Commission for approval at a Business Meeting.

(d) Public Programs. Large IOUs shall encourage mass-market automation of load management through information and programs.

(1) No later than eighteen (18) months after April 1, 2023, each Large IOU shall submit to the Executive Director a list of load flexibility programs deemed cost-effective by the Large IOU. The portfolio of identified programs shall provide any customer with at least one option for automating response to MIDAS signals indicating marginal cost-based rates, marginal prices, hourly or sub-hourly marginal greenhouse gas emissions, or other Commission-approved marginal signal(s) that enable automated end-use response.

(2) Within forty-five (45) months of April 1, 2023, each Large IOU shall offer to each of its electricity customers voluntary participation in a marginal cost-based rate developed according to Section 1623(a) if such rate is approved by the Large IOU's rate-approving body, or a cost-effective program identified according to Section 1623(d)(1) if such rate is not yet approved by the Large IOU's rate-approving body.

(3) Each Large IOU shall conduct a public information program to inform and educate the affected customers why marginal cost-based rates and automation are needed, how they will be used, and how these rates can save the customer money.

Credits

NOTE: Authority cited: Sections 25213, 25218(e) and 25403.5, Public Resources Code. Reference: Sections 25132 and 25403.5, Public Resources Code.

1. Amendment of section and NOTE filed 1-20-2023; operative 4-1-2023 (Register 2023, No. 3).

This database is current through 9/22/23 Register 2023, No. 38.

Cal. Admin. Code tit. 20, § 1623, 20 CA ADC § 1623

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[Home Table of Contents](#)**§ 1623.1. Large POU and Large CCA Requirements for Load Management Standards.**

20 CA ADC § 1623.1

Barclays Official California Code of Regulations

Barclays California Code of Regulations
 Title 20. Public Utilities and Energy
 Division 2. State Energy Resources Conservation and Development Commission (Refs & Annos)
 Chapter 4. Energy Conservation
 Article 5. Load Management Standards

20 CCR § 1623.1

§ 1623.1. Large POU and Large CCA Requirements for Load Management Standards.Currentness**(a) Large POU Plans to Comply with Load Management Standards**

(1) Within six months of April 1, 2023, each Large POU, and within one year of April 1, 2023, each Large CCA, shall submit a compliance plan that is consistent with this Section 1623.1 to its rate approving body for adoption in a duly noticed public meeting to be held within 60 days after the plan is submitted. The plan shall describe how the Large POU or the Large CCA will meet the goals of encouraging the use of electrical energy at off-peak hours, encouraging the control of daily and seasonal peak loads to improve electric system efficiency and reliability, lessening or delaying the need for new electrical capacity, and reducing fossil fuel consumption and greenhouse gas emissions. The plan shall include consideration of programs and rate structures as specified in section 1623.1 (b)-(d).

(A) The plan must evaluate cost effectiveness, equity, technological feasibility, benefits to the grid, and benefits to customers of marginal cost-based rates for each customer class.

(B) If after consideration of the factors in Subsection 1623.1(a)(1)(A) the plan does not propose development of marginal cost-based rates, the plan shall propose programs that enable automated response to marginal cost signal(s) for each customer class and evaluate them based on their cost-effectiveness, equity, technological feasibility, benefits to the grid, and benefits to customers.

(C) The Large POU or the Large CCA shall review the plan at least once every three years after the plan is adopted. The Large POU or Large CCA shall submit a plan update to its rate approving body where there is a material change to the factors considered pursuant to Subsections 1623.1 (a)(1)(A) and (B).

(2) The rate approving body of a Large POU or a Large CCA may approve a plan, or material revisions to a previously approved plan, that delays compliance or modifies compliance with the requirements of Subsections 1623.1 (b)-(c), if the rate approving body determines that the plan demonstrates any of the following:

(A) that despite a Large POU's or Large CCA's good faith efforts to comply, requiring timely compliance with the requirements of this article would result in extreme hardship to the Large POU or the Large CCA,

(B) requiring timely compliance with the requirements of this article would result in reduced system reliability (e.g., equity or safety) or efficiency,

(C) requiring timely compliance with the requirements of this article would not be technologically feasible or cost-effective for the Large POU to implement, or

(D) that despite the Large POU's or the Large CCA's good faith efforts to implement its load management standard plan, the plan must be modified to provide a more technologically feasible, equitable, safe or cost-effective way to achieve the requirements of this article or the plan's goals.

(3) Commission Approval of Large POU and Large CCA Plans to Comply with Load Management Standards and Material Plan Revisions

(A) Within thirty (30) days after adoption of a plan or material plan revision pursuant to this subdivision, each large POU and Large CCA shall submit its plan to comply with the requirements of this Section 1623.1 or material plan revision to the Executive Director.

(B) The Executive Director shall review plans or material plan revisions and either return them to the Large POU or the Large CCA for changes or submit them to the Commission for review and potential approval. The Executive Director shall make an initial determination whether the plan or material plan revision is consistent with the requirements of Section 1623.1(a)(1) and (2). In reviewing plans and material plan revisions, the Executive Director may request additional information or recommend changes to make it consistent with the requirements of Section 1623.1(a)(1) and (2). The Large POU or Large CCA shall respond to requests or recommendations within ninety (90) days of receipt from the Executive Director. The Executive Director shall then submit the plan or material plan revision to the Commission with a recommendation on whether to approve it. The Commission may also request additional information and shall approve plans and material plan revisions which are consistent with Section 1623.1(a)(1) and (2), and which show a good faith effort to meet the goals listed in Section 1623.1(a)(1) and (2). The Commission may place conditions on its approval of plans or material plan revisions that are necessary to guarantee that the plan or material plan revision will comply with Section 1623.1 (a)(1) and (2) by a date certain.

(C) Each Large POU and Large CCA shall submit to the Executive Director annual reports demonstrating their implementation of plans approved pursuant to this subsection, as such plans may be revised pursuant to this subsection. The reports shall be submitted one year after plans are approved pursuant to subsection (2) and annually thereafter.

(b) Large POU and Large CCA Marginal Cost-Based Rates and Programs. Each Large POU and each Large CCA shall develop marginal cost-based rates or public programs structured according to the requirements of this article.

(1) Total marginal cost shall be calculated as the sum of the marginal energy cost, the marginal capacity cost (generation, transmission, and distribution), and any other appropriate time and location dependent marginal costs, including the locational marginal cost of associated greenhouse gas emissions, on a time interval of no more than one hour. Energy cost computations shall reflect locational marginal cost pricing as determined by the associated balancing authority, such as the Los Angeles Department of Water and Power, the Balancing Authority of Northern California, or other balancing authority. Marginal capacity cost computations shall reflect the variations in the probability and value of system reliability of each component (generation, transmission, and distribution).

(2) Within two (2) years of April 1, 2023, each Large POU, and within twenty-seven (27) months of April 1, 2023, each Large CCA, shall apply to its rate-approving body for approval of at least one marginal cost-based rate, that meets the requirements of Subsection 1623.1(b)(1). Large CCAs may apply for approval of marginal cost-based rates that are offered by the Large IOUs in whose service areas the Large CCAs exist in.

(A) Large POU's and Large CCAs shall apply for approval of marginal cost-based rates only for those customer classes for which the rate-approving body determines such a rate will materially reduce peak load.

(B) Large POU's and Large CCAs shall provide the Commission with informational copies of tariff applications when they are submitted to their rate-approving bodies.

(3) No later than eighteen (18) months after April 1, 2023, each Large POU and each Large CCA shall submit to the Executive Director a list of load flexibility programs deemed cost-effective by the Large POU or the Large CCA.

(A) The portfolio of identified programs shall provide at least one option for automating response to MIDAS signals for each customer class that the rate-approving body determines such a program will materially reduce peak load.

(B) The programs shall allow customers to respond to MIDAS signals indicating marginal cost-based rates, marginal prices, hourly or sub-hourly marginal greenhouse gas emissions, or other Commission-approved marginal signal(s).

(4) Within three (3) years of April 1, 2023, each Large POU, and within fifty-one (51) months of April 1, 2023, each Large CCA, shall offer to each of its electricity customers voluntary participation in either a marginal cost-based rate developed according to Subsection 1623.1(b)(2), if such rate is approved by the Large POU's or Large CCA's rate-approving body, or a cost-effective program identified according to Subsection 1623.1(b)(3).

(5) Each Large POU and Large CCA shall conduct a public information program to inform and educate the affected customers why marginal cost-based rates or load flexibility programs, and automation are needed, how they will be used, and how these rates or programs can save the customer money.

(c) Publication of Machine-Readable Electricity Rates. No later than three (3) months after April 1, 2023, each Large POU and each Large CCA shall upload its existing time-dependent rates applicable to its customers to the Commission's Market Informed Demand Automation Server (MIDAS) database. Each Large POU and Large CCA shall upload all time-dependent rates, including those approved after April 1, 2023, to MIDAS prior to the effective date of the time-dependent rates each time a time-dependent rate is approved by the rate-approving body and each time a time-dependent rate changes.

The time-dependent rates uploaded to the MIDAS database shall include all applicable time-dependent cost components, including, but not limited to, generation, distribution, and transmission. The Commission maintains public access to the MIDAS database through an Application Programming Interface (API) that, provided a Rate Identification Number (RIN), returns information sufficient to enable automated response to marginal grid signals, such as price, emergency events, and greenhouse gas emissions.

(d) Enforcement. The Executive Director may, after reviewing the matter with the Large POU or the Large CCA, file a complaint with the Commission following the process set forth in Sections 1233.1 to 1233.4 or seek injunctive relief if a Large POU or Large CCA:

(1) Fails to adhere to its approved load management standard plan,

(2) Materially modifies its approved load management standard plan without approval,

(3) Does not provide information by a deadline established by the Executive Director or the Commission, or

(4) Violates the provisions of this article.

(e) There shall be no reimbursement to local government entities for the costs of carrying out the programs mandated by these standards, because the Commission has found these standards to be cost-effective. The savings which these entities will realize as a result of carrying out these programs will outweigh the costs associated with implementing these programs.

Credits

NOTE: Authority cited: Sections 25213, 25218(e) and 25403.5, Public Resources Code. Reference: Sections 25132 and 25403.5, Public Resources Code.

HISTORY

1. New section filed 1-20-2023; operative 4-1-2023 (Register 2023, No. 3).

This database is current through 9/22/23 Register 2023, No. 38.

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Appendix 2 – RateID List

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USCA-LALA-D330-0000
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USCA-LALA-CG2U-0000
USCA-LALA-X004-0000
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Appendix 3 – R1B0 Rate_Download - Excerpt (first 10 pages)

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Appendix 4 – Contract Rates for 070123

XA4U	XRT/XCD3 85 - 89.9999% load factor Alert Period with unmetered KVAR	2.95895	1.32325	0.15534	4.23	2.97	0	N/A	N/A	N/A	N/A	N/A	N/A
XA40	XRT/XCD3 85 - 89.9999% load factor Alert Period with PF 0.000 - 0.599	2.95866	1.32306	0.15522	4.23	2.97	0	0.01411	0.00952	0.00427	N/A	N/A	N/A
XA41	XRT/XCD3 85 - 89.9999% load factor Alert Period with PF 0.600 - 0.699	2.95866	1.32306	0.15522	4.23	2.97	0	0.01294	0.00872	0.00391	N/A	N/A	N/A
XA42	XRT/XCD3 85 - 89.9999% load factor Alert Period with PF 0.700 - 0.799	2.95866	1.32306	0.15522	4.23	2.97	0	0.00931	0.00633	0.00283	N/A	N/A	N/A
XA43	XRT/XCD3 85 - 89.9999% load factor Alert Period with PF 0.800 - 0.899	2.95866	1.32306	0.15522	4.23	2.97	0	0.00556	0.00376	0.0017	N/A	N/A	N/A
XA44	XRT/XCD3 85 - 89.9999% load factor Alert Period with PF 0.900 - 0.949	2.95866	1.32306	0.15522	4.23	2.97	0	0.00182	0.00126	0.00066	N/A	N/A	N/A
XA45	XRT/XCD3 85 - 89.9999% load factor Alert Period with PF 0.900 - 0.949	2.95866	1.32306	0.15522	4.23	2.97	0	0.00096	0.00066	0.0004	N/A	N/A	N/A
XA46	XRT/XCD3 85 - 89.9999% load factor Alert Period with PF 0.950 - 1.000	2.95866	1.32306	0.15522	4.23	2.97	0	0	0	0	N/A	N/A	N/A
X05U	XRT/XCD3 greater than 90% load factor with unmetered KVAR	0.18186	0.1755	0.15534	3.91	2.74	0	N/A	N/A	N/A	N/A	N/A	N/A
X050	XRT/XCD3 greater than 90% load factor with PF 0.000 - 0.599	0.18157	0.17531	0.15522	3.91	2.74	0	0.01411	0.00952	0.00427	N/A	N/A	N/A
X051	XRT/XCD3 greater than 90% load factor with PF 0.600 - 0.699	0.18157	0.17531	0.15522	3.91	2.74	0	0.01294	0.00872	0.00391	N/A	N/A	N/A
X052	XRT/XCD3 greater than 90% load factor with PF 0.700 - 0.799	0.18157	0.17531	0.15522	3.91	2.74	0	0.00931	0.00633	0.00283	N/A	N/A	N/A
X053	XRT/XCD3 greater than 90% load factor with PF 0.800 - 0.899	0.18157	0.17531	0.15522	3.91	2.74	0	0.00556	0.00376	0.0017	N/A	N/A	N/A
X054	XRT/XCD3 greater than 90% load factor with PF 0.900 - 0.949	0.18157	0.17531	0.15522	3.91	2.74	0	0.00182	0.00126	0.00066	N/A	N/A	N/A
X055	XRT/XCD3 greater than 90% load factor with PF 0.900 - 0.949	0.18157	0.17531	0.15522	3.91	2.74	0	0.00096	0.00066	0.0004	N/A	N/A	N/A
X056	XRT/XCD3 greater than 90% load factor with PF 0.950 - 1.000	0.18157	0.17531	0.15522	3.91	2.74	0	0	0	0	N/A	N/A	N/A
XA6U	XRT/XCD3 greater than 90% load factor Alert Period with unmetered KVAR	2.95895	1.32325	0.15534	3.91	2.74	0	N/A	N/A	N/A	N/A	N/A	N/A
XA60	XRT/XCD3 greater than 90% load factor Alert Period with PF 0.000 - 0.599	2.95866	1.32306	0.15522	3.91	2.74	0	0.01411	0.00952	0.00427	N/A	N/A	N/A
XA61	XRT/XCD3 greater than 90% load factor Alert Period with PF 0.600 - 0.699	2.95866	1.32306	0.15522	3.91	2.74	0	0.01294	0.00872	0.00391	N/A	N/A	N/A
XA62	XRT/XCD3 greater than 90% load factor Alert Period with PF 0.700 - 0.799	2.95866	1.32306	0.15522	3.91	2.74	0	0.00931	0.00633	0.00283	N/A	N/A	N/A
XA63	XRT/XCD3 greater than 90% load factor Alert Period with PF 0.800 - 0.899	2.95866	1.32306	0.15522	3.91	2.74	0	0.00556	0.00376	0.0017	N/A	N/A	N/A
XA64	XRT/XCD3 greater than 90% load factor Alert Period with PF 0.900 - 0.949	2.95866	1.32306	0.15522	3.91	2.74	0	0.00182	0.00126	0.00066	N/A	N/A	N/A
XA65	XRT/XCD3 greater than 90% load factor Alert Period with PF 0.900 - 0.949	2.95866	1.32306	0.15522	3.91	2.74	0	0.00096	0.00066	0.0004	N/A	N/A	N/A
XA66	XRT/XCD3 greater than 90% load factor Alert Period with PF 0.950 - 1.000	2.95866	1.32306	0.15522	3.91	2.74	0	0	0	0	N/A	N/A	N/A
CG2U	CG2A with Unmetered KVAR	0.18517	0.1778	0.157	4.7	3.25	0	N/A	N/A	N/A	0.15597	0.04265	0
CG20	CG2A with PF 0.000 - 0.599	0.18488	0.17761	0.15688	4.7	3.25	0	0.01437	0.00955	0.00426	0.15597	0.04265	0
CG21	CG2A with PF 0.600 - 0.699	0.18488	0.17761	0.15688	4.7	3.25	0	0.01317	0.00875	0.0039	0.15597	0.04265	0
CG22	CG2A with PF 0.700 - 0.799	0.18488	0.17761	0.15688	4.7	3.25	0	0.00948	0.00635	0.00282	0.15597	0.04265	0
CG23	CG2A with PF 0.800 - 0.899	0.18488	0.17761	0.15688	4.7	3.25	0	0.00566	0.00377	0.0017	0.15597	0.04265	0
CG24	CG2A with PF 0.900 - 0.949	0.18488	0.17761	0.15688	4.7	3.25	0	0.00186	0.00126	0.00064	0.15597	0.04265	0
CG25	CG2A with PF 0.900 - 0.949	0.18488	0.17761	0.15688	4.7	3.25	0	0.00098	0.00066	0.0004	0.15597	0.04265	0
CG26	CG2A with PF 0.950 - 1.000	0.18488	0.17761	0.15688	4.7	3.25	0	0	0	0	0.15597	0.04265	0
CG3U	CG3A with Unmetered KVAR	0.18186	0.1755	0.15534	5.5	3	0	N/A	N/A	N/A	0.14569	0.03578	0
CG30	CG3A with PF 0.000 - 0.599	0.18157	0.17531	0.15522	5.5	3	0	0.01411	0.00952	0.00427	0.14569	0.03578	0
CG31	CG3A with PF 0.600 - 0.699	0.18157	0.17531	0.15522	5.5	3	0	0.01294	0.00872	0.00391	0.14569	0.03578	0
CG32	CG3A with PF 0.700 - 0.799	0.18157	0.17531	0.15522	5.5	3	0	0.00931	0.00633	0.00283	0.14569	0.03578	0
CG33	CG3A with PF 0.800 - 0.899	0.18157	0.17531	0.15522	5.5	3	0	0.00556	0.00376	0.0017	0.14569	0.03578	0
CG34	CG3A with PF 0.900 - 0.949	0.18157	0.17531	0.15522	5.5	3	0	0.00182	0.00126	0.00066	0.14569	0.03578	0
CG35	CG3A with PF 0.900 - 0.949	0.18157	0.17531	0.15522	5.5	3	0	0.00096	0.00066	0.0004	0.14569	0.03578	0
CG36	CG3A with PF 0.950 - 1.000	0.18157	0.17531	0.15522	5.5	3	0	0	0	0	0.14569	0.03578	0

Appendix 5 – Standard Rates for 070123

RIN	Description	High_Peak	Low_Peak	Base_Energy	High_Peak	Low_Peak	Peak_Base	Demand	High_Peak	Low_Peak	Base_PF	High_Peak	Low_Peak	Base_backup
R1B0	R1B	0.29498	0.23658	0.20914	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R1E0	R1B with EV service rider	0.29351	0.23511	0.18267	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A1B0	A1B	0.27156	0.22166	0.19248	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A1E0	A1B with EV service rider	0.27156	0.22166	0.16748	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A2BF	A2B with Facility demand under 250 KW	0.18488	0.17761	0.15688	10	3.75	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A2BU	A2B with Unmetered KVAR	0.18517	0.1778	0.157	10	3.75	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A2B0	A2B with PF 0.000 - 0.599	0.18488	0.17761	0.15688	10	3.75	0	0.01437	0.00955	0.00426	N/A	N/A	N/A	N/A
A2B1	A2B with PF 0.600 - 0.699	0.18488	0.17761	0.15688	10	3.75	0	0.01317	0.00875	0.0039	N/A	N/A	N/A	N/A
A2B2	A2B with PF 0.700 - 0.799	0.18488	0.17761	0.15688	10	3.75	0	0.00948	0.00635	0.00282	N/A	N/A	N/A	N/A
A2B3	A2B with PF 0.800 - 0.899	0.18488	0.17761	0.15688	10	3.75	0	0.00566	0.00377	0.0017	N/A	N/A	N/A	N/A
A2B4	A2B with PF 0.900 - 0.949	0.18488	0.17761	0.15688	10	3.75	0	0.00186	0.00126	0.00064	N/A	N/A	N/A	N/A
A2B5	A2B with PF 0.950 - 1.000	0.18488	0.17761	0.15688	10	3.75	0	0.00098	0.00066	0.0004	N/A	N/A	N/A	N/A
A2B6	A2B with PF 0.950 - 1.000	0.18488	0.17761	0.15688	10	3.75	0	0	0	0	N/A	N/A	N/A	N/A
A2EF	A2B with Facility demand under 250 KW with EV Service Rider	0.18488	0.17761	0.13188	10	3.75	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A2EU	A2B with Unmetered KVAR with EV Service Rider	0.18517	0.1778	0.157	10	3.75	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A2E0	A2B with PF 0.000 - 0.599 with EV Service Rider	0.18488	0.17761	0.13188	10	3.75	0	0.01437	0.00955	0.00426	N/A	N/A	N/A	N/A
A2E1	A2B with PF 0.600 - 0.699 with EV Service Rider	0.18488	0.17761	0.13188	10	3.75	0	0.01317	0.00875	0.0039	N/A	N/A	N/A	N/A
A2E2	A2B with PF 0.700 - 0.799 with EV Service Rider	0.18488	0.17761	0.13188	10	3.75	0	0.00948	0.00635	0.00282	N/A	N/A	N/A	N/A
A2E3	A2B with PF 0.800 - 0.899 with EV Service Rider	0.18488	0.17761	0.13188	10	3.75	0	0.00566	0.00377	0.0017	N/A	N/A	N/A	N/A
A2E4	A2B with PF 0.900 - 0.949 with EV Service Rider	0.18488	0.17761	0.13188	10	3.75	0	0.00186	0.00126	0.00064	N/A	N/A	N/A	N/A
A2E5	A2B with PF 0.900 - 0.949 with EV Service Rider	0.18488	0.17761	0.13188	10	3.75	0	0.00098	0.00066	0.0004	N/A	N/A	N/A	N/A
A2E6	A2B with PF 0.950 - 1.000 with EV Service Rider	0.18488	0.17761	0.13188	10	3.75	0	0	0	0	N/A	N/A	N/A	N/A
A3AF	A3A with Facility demand under 250 KW	0.18157	0.17531	0.15522	9.7	3.3	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A3AU	A3A with unmetered KVAR	0.18186	0.1755	0.15534	9.7	3.3	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A3A0	A3A with PF 0.000 - 0.599	0.18157	0.17531	0.15522	9.7	3.3	0	0.01411	0.00952	0.00427	N/A	N/A	N/A	N/A
A3A1	A3A with PF 0.600 - 0.699	0.18157	0.17531	0.15522	9.7	3.3	0	0.01294	0.00872	0.00391	N/A	N/A	N/A	N/A
A3A2	A3A with PF 0.700 - 0.799	0.18157	0.17531	0.15522	9.7	3.3	0	0.00931	0.00633	0.00283	N/A	N/A	N/A	N/A
A3A3	A3A with PF 0.800 - 0.899	0.18157	0.17531	0.15522	9.7	3.3	0	0.00556	0.00376	0.0017	N/A	N/A	N/A	N/A
A3A4	A3A with PF 0.900 - 0.949	0.18157	0.17531	0.15522	9.7	3.3	0	0.00182	0.00126	0.00066	N/A	N/A	N/A	N/A
A3A5	A3A with PF 0.900 - 0.949	0.18157	0.17531	0.15522	9.7	3.3	0	0.00096	0.00066	0.0004	N/A	N/A	N/A	N/A
A3A6	A3A with PF 0.950 - 1.000	0.18157	0.17531	0.15522	9.7	3.3	0	0	0	0	N/A	N/A	N/A	N/A
A3EF	A3A with Facility demand under 250 KW with EV Service Rider	0.18157	0.17531	0.13022	9.7	3.3	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A3EU	A3A with Unmetered KVAR with EV Service Rider	0.18186	0.1755	0.15534	9.7	3.3	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A3E0	A3A with PF 0.000 - 0.599 with EV Service Rider	0.18157	0.17531	0.13022	9.7	3.3	0	0.01411	0.00952	0.00427	N/A	N/A	N/A	N/A
A3E1	A3A with PF 0.600 - 0.699 with EV Service Rider	0.18157	0.17531	0.13022	9.7	3.3	0	0.01294	0.00872	0.00391	N/A	N/A	N/A	N/A
A3E2	A3A with PF 0.700 - 0.799 with EV Service Rider	0.18157	0.17531	0.13022	9.7	3.3	0	0.00931	0.00633	0.00283	N/A	N/A	N/A	N/A
A3E3	A3A with PF 0.800 - 0.899 with EV Service Rider	0.18157	0.17531	0.13022	9.7	3.3	0	0.00556	0.00376	0.0017	N/A	N/A	N/A	N/A
A3E4	A3A with PF 0.900 - 0.949 with EV Service Rider	0.18157	0.17531	0.13022	9.7	3.3	0	0.00186	0.00126	0.00064	N/A	N/A	N/A	N/A
A3E5	A3A with PF 0.900 - 0.949 with EV Service Rider	0.18157	0.17531	0.13022	9.7	3.3	0	0.00096	0.00066	0.0004	N/A	N/A	N/A	N/A
A3E6	A3A with PF 0.950 - 1.000 with EV Service Rider	0.18157	0.17531	0.13022	9.7	3.3	0	0	0	0	N/A	N/A	N/A	N/A