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(Revised) Draft 2023 Integrated Energy Policy Report

Additional submitted attachment is included below.

BEFORE THE STATE OF CALIFORNIA ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

IN THE MATTER OF:)	Docket No. 23-IEPR-01
)	
<i>General Scope</i>)	LADWP Revised Comments Re:
)	Draft 2023 Integrated Energy
)	Policy Report (IEPR)
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REVISED COMMENTS FROM THE LOS ANGELES DEPARTMENT OF WATER AND POWER TO THE
CALIFORNIA ENERGY COMMISSION ON THE DRAFT 2023 INTEGRATED ENERGY POLICY REPORT (IEPR)

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Dated: December 15, 2023

**BEFORE THE STATE OF CALIFORNIA ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION**

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**REVISED COMMENTS FROM THE LOS ANGELES DEPARTMENT OF WATER AND POWER TO THE
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Introduction

The Los Angeles Department of Water and Power (LADWP) appreciates the California Energy Commission (Commission) for their ongoing efforts to meet the requirements of Senate Bill 1389 of 2002 (SB 1389) in terms of addressing climate change, resource conservation, and energy reliability. LADWP recognizes the challenges of accelerating the connection of new clean resources to the grid to meet the growing energy demands that are described within the Draft 2023 Integrated Energy Policy Report (IEPR), while minimizing costs for LADWP’s customers.

The City of Los Angeles (City of LA) is a municipal corporation and charter city organized under the provisions set forth in the California Constitution. LADWP is a proprietary department of the City of LA, pursuant to the Los Angeles City Charter, whose governing structure includes a Mayor, a fifteen-member City Council, and a five-member Board of Water and Power Commissioners. LADWP is the third largest electric utility in the state, one of five California Balancing Authorities (BAs), and the nation’s largest municipal utility, serving a population of over four million people within a 478 square mile service territory that covers the City of LA and portions of the Owens Valley. LADWP exists to support the growth and vitality of the City of LA, its residents, businesses and the communities we serve, providing safe, reliable and cost-effective water and power in a customer-focused and environmentally responsible manner.

LADWP commends the Commission on their various energy assessments and forecasts detailed in the IEPR. The IEPR raises awareness of new and ongoing initiatives that aim to address growing problems the industry is facing in the deployment of clean energy resources and provides insightful recommendations to address the challenges identified in the report. LADWP has reviewed and appreciates the opportunity to submit the following written comments on the Draft 2023 IEPR. These revised comments supersede and are intended to replace LADWP’s comments submitted December 1,

2023 (docket 23-IEPR-01, TN# 253450). These revised comments include recommendations that are meant to be more easily implemented in amending the Draft 2023 IEPR. LADWP acknowledges that the IEPR is based on statutory and policy initiatives including the Senate Bill 100 target of 100% clean energy by 2045. Separately, LADWP has established its own local goal of 100% clean energy by 2035, pursuant to the Los Angeles City Council motion in September 2021.

Specific Revised Comments

1. Targeted Support for Publicly-Owned and Cooperative Utilities

In Chapter 1 “Plugging In — Speeding Deployment and Connection of Clean Resources to the Grid”, there are recommendations to provide “targeted support to publicly-owned and cooperative utilities” (e-Page 44), and “improving and expanding the scope of publicly available tools and datasets” (e-Page 61), which LADWP strongly supports. LADWP recently made its Distribution Capacity Maps¹ publicly available to provide information on where capacity is available to guide developer decisions. CEC may consider developing a centralized site, involving the local regulatory authorities in its implementation. This would remove the administrative burden on the smaller utilities that often lack the resources to develop and maintain their own tools, and provide a common location for developers to access information across utility service territories.

2. Publicly Owned Utility (POU) Perspective on Rate Impacts

For Chapter 1 “Plugging In — Speeding Deployment and Connection of Clean Resources to the Grid”, sub-heading “Annual Reporting on Actions to Limit Utility Cost and Rate Increases” (e-Page 54), while LADWP does not disagree with this paragraph, it and much of the document largely address issues pertaining to investor-owned utilities (IOUs). LADWP’s Board of Water and Power Commissioners is the rate-approving body for LADWP. The second sentence, which states that rate increases have outpaced inflation since 2021, does not hold true for LADWP. LADWP’s rate structure includes pass-through rates and base rates, with base rates designed to recover fixed costs. LADWP’s last rate action, which was effective in fiscal year (FY) 2016, set base rates through FY 2020. Since FY 2020, base rates have remained at the same levels. Though, at the time, there were plans to proceed with a new rate action, due to the pandemic, the rate action was delayed. LADWP will require a new rate action as it proceeds on a path to attain 100% renewable electricity. Also, while LADWP has increased its vegetation management activities, this has not created the same upward pressure on rates as it has for the IOUs.

¹ Los Angeles Department of Water and Power: Power Capacity
<https://ladwp-power.maps.arcgis.com/apps/webappviewer/index.html?id=290be9aa52694ef39bf3088940079f62>

3. Accuracy of Data and Recommendations Regarding Renewable Hydrogen²

LADWP appreciates the CEC's inclusion of its green hydrogen efforts within the "Status of Hydrogen in the Electric Power Sector" Section of Chapter 2. LADWP would like to provide updates to the paragraph commencing on e-Page 74 to further capture LADWP's current status and goals. As such, LADWP recommends that the CEC consider replacing the paragraph with the language below.

"Other efforts include the Los Angeles Department of Water and Power's (LADWP's) Intermountain Power Plant (IPP) project in Delta, Utah, and its plans to upgrade the Scattergood facility in Playa Del Rey, California. Construction on the IPP project began in 2022, with plans for clean and renewable hydrogen production with storage in underground salt caverns. The technology at IPP will be capable of blending up to 30% green hydrogen starting in 2025. The subsequent goal of reaching 100% green hydrogen at IPP will be dependent on hydrogen supply availability and the advancement of the required technology to reach those scales. At Scattergood Generating Station, LADWP has committed \$800 million to replace the existing generation capacity of Units 1 and 2 with new, modern units that will have the capability to utilize renewable hydrogen fuel. LADWP hopes to similarly decarbonize its Harbor (in Wilmington), Haynes (in Long Beach), and Valley (in Sun Valley) Generating Stations, all used for firm capacity to ensure system reliability and resiliency. Conversion to green hydrogen is critical for LADWP to meet its local goal of 100% clean energy by 2035.

In September 2023, FuelCell Energy and Toyota completed a tri-gen system that produces renewable electricity, renewable hydrogen, and water from directed biogas at the Port of Long Beach."

4. Specific Questions and Clarifications

LADWP is providing specific questions and request for clarification below for the CEC's consideration.

- Subsection "Pathways to Use Clean and Renewable" (e-Page 73) contains the following sentence: "Hydrogen combustion, like traditional fossil fuel combustion, produces nitrogen oxides (NOx) emissions — which lead to formation of the health-damaging pollutants, ozone, and particulate matter — that require integrated controls which combustion system manufacturers include on their products". LADWP recommends revising the sentence to state "...that require integrated controls *and purpose-built hydrogen combustors* which combustion system manufacturers...", in order to better manage NOx emission.

² All references to 'hydrogen' or 'renewable hydrogen' are with respect to hydrogen generated by renewable energy.

- Subsection “Preliminary Analysis of Using Clean and Renewable Hydrogen in Electric Power Generation” (e-Page 79) contains the following sentence: “Based on a high heating value of 141.88 megajoules per kg of hydrogen, it would take about 1.59 million MT to fully replace fossil gas estimated to be used in the electric sector in 2045. This scenario can be considered as a high bookend of potential growth of hydrogen in the electric power sector”. The value referenced should instead be the lower heating value. Also, a maximum of 60% efficiency should be applied as combined cycles and the most efficient fuel cells currently operate at approximately 60% efficiency. If both mentioned items are considered, then the high bookend would be expected to increase.
- Subsection “When the Hydrogen Is Needed Will Impact Electrolyzer and Storage Requirements” (e-Page 81) contains the following sentence: “The large volumes of hydrogen considered in these scenarios would require a hydrogen pipeline or sequential deliveries via truck, which may not be a feasible option for power plants”. LADWP recommends making a distinction between the feasibility of a hydrogen pipeline versus deliveries via truck. While a pipeline may be a feasible option, delivery via truck is not feasible for utility-scale power plants. For example, a single utility-scale gas turbine consuming 100 percent hydrogen will require five liquid hydrogen trucks per hour or 40 gaseous hydrogen trucks per hour.
- In subsection “Future Analyses and Barriers That Need to be Addressed,” (e-Page 82), in regards to the bullet “Emissions and equity considerations”, the latest research suggests that NOx emissions will stay the same or be slightly reduced, using technologies for NOx reduction during and after combustion. This will result in NOx emissions released to the atmosphere to be similar or less than emissions rates observed today for modern gas-fueled units. Similarly, the statement, “Combusting hydrogen can result in greater NOx emissions”, can be misleading, as technology exists to reduce NOx during and after combustion. Recent studies demonstrate that blending doesn’t only maintain NOx emissions levels, but may also reduce NOx, CO, hydrocarbons and other pollutants. Siemen Energy’s demonstration test at Constellation Hillabee, operating at 38% hydrogen, did not increase NOx emissions³.

Conclusion

LADWP recognizes and appreciates the considerable amount of work and research the Commission took to develop and create the Draft 2023 IEPR. Thank you for the opportunity to submit these comments. If you have any questions, please contact me at (213) 367-4631 or Mr. Rockeish Mckenzie at (213) 367-4341.

³ Constellation Sets Industry Record for Blending Hydrogen with Natural Gas to Further Reduce Emissions (2023)
<https://www.constellationenergy.com/newsroom/2023/Constellation-sets-industry-record-for-blending-hydrogen-with-natural-gas-to-further-reduce-emissions.html>

Dated: December 15, 2023

Respectfully Submitted,

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