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LADWP Comments on the Draft 2021 IEPR - Volume III

Additional submitted attachment is included below.

**BEFORE THE ENERGY COMMISSION
OF THE STATE OF CALIFORNIA**

IN THE MATTER OF:) Docket No. 21-IEPR-01
)
2021 Integrated Energy Policy Report)
(2021 IEPR))
) RE: Notice of Comment Period
) Extension for the Draft 2021
) Integrated Energy Policy Report,
) Volume III: Decarbonizing the
) State's Gas System

**COMMENTS FROM THE LOS ANGELES DEPARTMENT OF WATER AND POWER (LADWP) TO THE
CALIFORNIA ENERGY COMMISSION (CEC) ON THE DRAFT 2021 INTEGRATED ENERGY POLICY
REPORT (IEPR), VOLUME III**

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Dated: January 28, 2022

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OF THE STATE OF CALIFORNIA**

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REPORT (IEPR), VOLUME III**

The Los Angeles Department of Water and Power (LADWP) appreciates the opportunity to review and comment on the Draft 2021 Integrated Energy Policy Report (IEPR), Volume III.

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 a vertically-integrated publicly-owned electric utility of the City of LA, serving a population of over 4 million people within a 465 square mile service territory covering the City of LA and portions of the Owens Valley. The LADWP is the third largest electric utility in the state, one of five California balancing authorities, and the nation’s largest municipal utility. LADWP exists to support the growth and vitality of the City of Los Angeles, its residents, businesses and the communities it serves, providing safe, reliable and cost-effective water and power in a customer-focused and environmentally responsible manner.

LADWP’s 100% Renewables (LA100) Study, released by the U.S. Department of Energy’s National Renewable Energy Laboratory (NREL) in March 2021, identified multiple paths for LADWP to achieve a 100% renewable and carbon-free grid as early as 2035. Following the release of the study, Mayor Eric Garcetti and the L.A. City Council committed LADWP to achieve 100% carbon-free energy by 2035. Early & No Biofuels is the only scenario that meets LA’s 100% clean energy goals 10 years earlier than the other scenarios. In addition to accelerating renewables, transmission, and energy storage, this scenario assumes higher levels of customer rooftop solar adoption and excludes the use of biofuels because of concerns about sustainability. In addition, it builds infrastructure to produce green hydrogen fuel from

renewable-based electricity and uses that fuel in combustion turbines to provide firm energy during times of stress load conditions (e.g. transmission loss or consecutive days of low renewable production). LADWP views green hydrogen as a potential pathway to achieving the last 10% carbon-free and is supportive of including green hydrogen as an alternative clean energy resource for meeting LADWP's carbon-free goals by 2035.

LADWP is submitting the specific written comments below for CEC to consider certain modifications to the Draft 2021 IEPR, Volume III.

SPECIFIC COMMENTS AND UPDATES

1. Draft 2021 IEPR, Volume III, Page 31, Changing Daily Gas Demand for Electric Generators, 2nd Paragraph

LADWP is requesting to update the paragraph as follows:

As the SB 100 joint agency study notes, in the longer term some gas capacity is retained for reliability needs in 2045.³⁴ The California Independent System Operator (California ISO) and ~~Los Angeles Department of Water Resources Los Angeles Department of Water and Power~~ (LADWP) also identify a need for local, in-basin gas or thermal generation in the Greater Los Angeles area to support reliability, discussed below. Renewable gas and renewable hydrogen are zero-carbon fuels that may be able to displace or supplement fossil gas use in electric generation for reliability and renewable integration. (Chapter 4.)

2. Draft 2021 IEPR, Volume III, Page 42, Aliso Canyon and Local Reliability, 1st Paragraph

The existing language within the above cited section of the IEPR should be updated to more accurately reflect LADWP's plans. Currently, the language, which is excerpted and stricken out below, suggests that LADWP will have a reduced need for in-basin capacity. However, LADWP is planning to achieve 100% carbon-free by 2035 which requires the firm capacity of 3,350 MW by 2045 according to the LA100 Study's Early & No Biofuels scenario. To be consistent with the LA100 Study and LADWP's latest carbon-free goals, LADWP is requesting to update the paragraph as follows:

~~*By 2045, however, LADWP still has a need for roughly 2,600 MW of renewable or thermal capacity in Los Angeles (down from 3,400 MW today) to meet peak demand and ensure reliability, whether it is renewable gas or hydrogen.⁵⁴ The LA100 study estimated that the local, in-basin capacity needs from combustion turbines is approximately 2,100 MW in 2035 and 3,350 MW in 2045 for the Early & No Biofuels - Moderate scenario.¹*~~

¹ Steinberg, Daniel, Paul Denholm, Jaquelin Cochran, Brady Cowiestoll, Jennie Jorgenson, Matt Irish, Himanshu Jain, Lily Wu, Gord Stephen, and Sarah Awara. 2021. "Chapter 6: Renewable Energy Investments and Operations." In The Los Angeles 100% Renewable Energy Study, edited by Jaquelin Cochran and Paul Denholm. Golden, CO: National Renewable Energy Laboratory. NREL/TP-6A20-79444-6. <https://www.nrel.gov/docs/fy21osti/79444-6.pdf>.

This local capacity is heavily relied upon during stressed grid conditions, where low-frequency, high-impact events such as wildfires or earthquakes could severely reduce LADWP's ability to import renewables from outside the LA Basin. The Early & No Biofuels scenario is particularly significant because it achieves 100% carbon-free by 2035; in September 2021, the Los Angeles City Council instructed LADWP to plan for achieving 100% carbon-free energy by 2035.

3. Draft 2021 IEPR, Volume III, Page 73, Efforts to Promote Renewable Hydrogen and Reduce Costs, 2nd Paragraph

LADWP would like to revise this section of the IEPR to more closely align with the intent of its LA100 Study report. Specifically, the changes proposed below highlight LADWP's need for firm capacity as the primary purpose for developing green hydrogen plans. The proposed update also reflects the needed infrastructure and market to support the deployment of cost-competitive green hydrogen. Finally, it is too premature to state LADWP's plans for procuring and/or producing green hydrogen. To be consistent with the LA100 Study and LADWP's latest carbon-free goals, LADWP is requesting to update the paragraph as follows:

LADWP responded to this directive by contracting with the National Renewable Energy Laboratory (NREL) to prepare an integrated engineering-economic analysis. In development with LADWP staff, NREL evaluated nine scenarios under different customer demand projections, plus differing levels of energy efficiency, electrification, and demand response. ~~The finding of this analysis that is common across all scenarios; also relevant here is the need for at least 2,600 MW of combustion turbines, sited within the Greater Los Angeles Area and fueled by green electrolytic hydrogen or other renewable fuels. LADWP plans to procure hydrogen to fuel these combustion turbines produced by manufacturers and distributed by the Southern California Gas Company (SoCalGas).~~ A finding from the analysis that is common across all scenarios is the need for firm capacity from renewably fueled combustion turbines sited at LADWP's existing in-basin generating stations. Electrolytic hydrogen is a renewable fuel that may support LADWP's future firm capacity needs as it retires the once-through cooling units and decarbonizes its generation fleet. Among the many challenges for the deployment of hydrogen-fueled combustion turbines is the development of the necessary infrastructure to produce and utilization of cost-competitive green hydrogen. LADWP issued a Request for Information in August 2021 to better understand the opportunities and challenges for green hydrogen and is in the early stages of developing its strategy to maintain local, firm capacity.

LADWP appreciates the tremendous amount of work and coordination to arrive at the Draft 2021 IEPR. Thank you for the opportunity to submit these comments and requests. If you have any questions, please contact myself at (213) 367-2525 or Mr. Scott Hirashima at (213) 367-0852.

Dated: January 28, 2022

Respectfully Submitted,



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