OFFICE OF PUBLIC ACCOUNTABILITY

City of Los Angeles
Interdepartmental Memorandum

Date: October 22, 2025

To: Los Angeles Department of Water and Power Board of Commissioners

CC: Los Angeles Department of Water and Power Senior Management*

From: Timothy O'Connor, Executive Director, Office of Public Accountability
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Subject: 1) Situational Review of Scattergood Modernization Project and 2) Comment in Advance of the October 28, 2025 Board of Commissioners Meeting Related to Approval of the Project and Adoption of the Final Environmental Impact Report in Accordance with the California Environmental Quality Act

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EXECUTIVE SUMMARY:

The Office of Public Accountability/Ratepayer Advocate (OPA) performed an evaluation of the Los Angeles Department of Water and Power's (LADWP) plan to modernize the Scattergood Generating Station. OPA's review focused on LADWP modelling findings related to the 1) facility need, 2) project costs and development timeline, and 3) likelihood of availability and cost of green hydrogen for use at the facility. Based on this analysis, OPA makes the following observations:

- **LADWP's decision to pursue modernization of the Scattergood Generating Station by constructing another generating station of similar size is reasonable**, based on extensive modeling and due diligence by both LADWP and third-party experts. While it is important to continue efforts to pursue demand reduction, transmission upgrades and distributed energy resource deployment, among others, throughout Los Angeles, LADWP found that even a combination of resource alternatives could not adequately replace Scattergood's function of providing reliable, in-basin backup power under stressed conditions.

- The Scattergood Modernization Project (SMP) has already experienced, and **it is highly likely the SMP will continue to confront substantial and complex cost and timeline risks**. OPA market analysis finds that overall costs for both combined-cycle gas turbines and green hydrogen have risen dramatically since the project was designed – rendering the cost estimate of $800,000,000 highly unlikely. Further,

increased purchase and development timelines for power generation equipment make LADWP's December 31, 2029 regulatory deadline for Once-Through-Cooling compliance increasingly challenged.

- Increasing uncertainty in market maturity and cost of green hydrogen as a fuel poses **a risk that SMP will not have hydrogen available for use within the 5–10 year timeline needed to meet LA100 policy targets**. This risk lies not the technical reliability of the turbines, but in the market development of green hydrogen.

Based on the aforementioned observations, OPA makes the following recommendations related to the Board's approval of the SMP. These recommendations are intended to provide for transparent and informed decision making, risk reduction and ratepayer protections to ensure an investment at the facility is in the ratepayer interest.

- OPA finds that the bids submitted for the SMP RFP will likely illuminate total project costs and necessary development timelines. Given the importance of this project to regional reliability, potential impact on rates, and regulatory compliance, **OPA recommends LADWP provide an interim briefing to the Board, and appropriate stakeholders,** with appropriate provisions for confidentiality and in alignment with city procurement policy, **once bids are submitted. This will help manage for potential cost and timeline overruns.**

- OPA finds that, due to uncertainty of regional hydrogen development in Los Angeles, there may not be sufficient hydrogen available to supply Scattergood with up to 30% of its fuel by the end of 2029, or up to 100% by 2035 to meet the policy goals of LA100. Given the importance of this project to regional grid reliability, decarbonization, and regional energy development, **OPA recommends LADWP maintain, and if needed increase its role in regional green hydrogen market development efforts. OPA further recommends LADWP provide periodic reports to the board on regional green hydrogen production progress (e.g. volumes, costs, relevance to the Scattergood Generating Station, etc.) and LADWP's role therein.**

INTRODUCTION:

The Office of Public Accountability (OPA) recognizes and commends the Los Angeles Department of Water and Power's (LADWP) ongoing focus to achieving the city's broad goal of maintaining a safe, reliable and affordable electric system while also achieving the ambitious LA100 goals and transitioning to a carbon-free electricity grid by 2035. This commitment is crucial for achieving a clean energy future for Los Angeles and positions the region to be ready to integrate new and innovative technology that can reduce long-term costs and manage energy system vulnerabilities.

As directed by OPA's Charter dictated mission, a paramount priority of the Ratepayer Advocate's office is to help ensure utility investments in the power system are performed in

a manner that maximizes benefits for ratepayers and ensures electricity rates are reasonable and affordable. **As a result, in evaluating the Scattergood modernization strategy of LADWP, one of OPA's primary objectives is to prevent a scenario where ratepayers are burdened with substantial investments that do not materialize - resulting in stranded costs and assets.** The Office further aims to make LADWP's financial planning more transparent. This will allow for fuller visibility of potential investment risks and opportunities, leading to an economically sustainable transition to a carbon-free grid.

This memo summarizes OPA's high-level independent review of LADWP's work to date and performs a situational review of the current proposal for the Scattergood Modernization Project (SMP). Based on LADWP's analysis provided and publicly available studies, a power supply solution at the Scattergood Generating Station (Scattergood) is not only vital for LADWP's decarbonization goals, but also for the reliability of the region. A fiscally responsible outcome for ratepayers' hinges on careful consideration of key factors and observations outlined below.

KEY OBSERVATIONS AND RECOMMENDATIONS:

1. LADWP has completed extensive modeling and appropriate diligence on possible modernization pathways for the Scattergood facility.

OPA review of the SMP, and associated documentation finds that LADWP has utilized its Integrated Resource Planning model methodology to determine needs and options to modernize Scattergood. There are multiple layers to this analysis, each considering a different set of factors:

- A capacity expansion screen which produces a least cost, resource build conclusion while considering necessary reliability factors
- A resource adequacy screen using federal regulatory standards to determine the best pathway to ensure reliability and minimize load shedding events
- A production cost model to simulate operating costs within the power system to predict cost and emission data on an hourly basis over a 21-year horizon
- Incorporation of temperature rise projections across the region associated with climate change

In addition to consideration of green hydrogen enabled facility, LADWP completed internal assessments and leveraged third-party expertise of the National Renewable Energy Lab (NREL) to review potential alternative technologies - and provided those to the public. The NREL Scattergood Modernization Alternatives: Summary of Findings study is publicly available and reviewed options for new transmission investments, energy storage solutions, hydrogen fuel cell technology, and additional demand response options. Within this analysis, NREL confirms that Scattergood functions as a back-up facility, offering power generation when other resources are unavailable or insufficient. The analysis indicates no

other resource alternatives, or combination of resource alternatives, can adequately fulfill this requirement.[1]

To verify internal modeling related to hydrogen facility planning and cost accounting, OPA met with LADWP staff to evaluate the integration of information and assumptions gathered from the Intermountain Power Plant (IPP) and its accompanying Advanced Clean Energy Storage (ACES) green hydrogen facility. In particular, OPA found that while LADWP confirmed its turbine cost estimates with IPP, given the Utah facility has commenced construction such estimates may not be fully reflective of current market conditions. However, by closely monitoring IPP's progress, LADWP can gain insight into the ongoing technical, operational, logistical, and economic complexities involved in such a large-scale energy transition. This proactive approach will enhance LADWP's ability to anticipate and mitigate potential obstacles at Scattergood, adopt best practices, and manage progress towards green hydrogen implementation, thereby avoiding known challenges and streamlining the transition.

FINDING:

- OPA's review has determined that **LADWP has explored a range of possible technology options and used reasonable assumptions.**
- However, as explained below, given the fast-moving nature of power markets, **IPP cost estimates and quotes from technology providers older than a few months may not be reflective of the responses it will receive for the Scattergood RFP.**
- Notwithstanding potential costs, given the need to guarantee reliable in-basin power generation to accommodate projected future energy demand under stressed scenarios while supporting regional decarbonization goals, **LADWP's proposal to modernize the existing natural gas fueled units and integrate green hydrogen as a fuel source at Scattergood is reasonable.**

2. <u>The costs and timelines of converting Scattergood to a hydrogen-enabled generation facility will be substantial and complex and are likely to exceed original estimates.</u>

The upfront infrastructure capital expenditure costs and ongoing expenses to maintain and operate Scattergood using green hydrogen are expected to be incremental when compared to the existing facility, or when compared to a new natural gas only facility. Per LADWP provided information, the SMP will replace the generation capacity of existing aging Scattergood Units 1 and 2 to a combined-cycle gas system that would consist of 1 gas unit (~220MW) and 1 steam unit (126 MW). **The cost of a ~350MW gross turbine that can operate on a blend of natural gas and green hydrogen is expected to be ~20% higher than**

[1] OPA requested additional clarification from LADWP on the option of carbon capture and storage (CCS) technology at the facility. Internal teams at LADWP shared that LADWP Department had previously modeled the use of CCS at the Valley Generation Station, which has a larger physical footprint available than Scattergood. The energy and financial costs associated with on-site power generation to run the CCS units was determined insurmountable, in addition to a lack of suitable sequestration sites.

a traditional natural gas turbine, with final cost estimates available once RFP bids are submitted.

Independently, a memo prepared by OPA's consultant (Current Energy Group) in August 2025 projected that costs have increased dramatically since SMP was originally estimated. Capital costs for combined cycle natural gas turbines (CCGT) is estimated at $2,400-$3,000/kW, up from ~$800/kW only a year ago.[2] Although LADWP has yet to receive formal bids for the modernization project, LADWP staff assert they have reviewed turbine cost estimates that were received from the IPP project. However, these may be out of date given the rapidity of changes in the gas turbine market.

Additionally, technical diligence completed by OPA third-party consultants shows that development timelines for gas fired combined cycle turbines has expanded to be 6-8 years, an increase of 1-2 years since the beginning of 2025.[3] The increase is attributed in part to demand impacts associated with economy wide energy consumption increases. OPA expects this will directly affect Scattergood's anticipated transition target of 2029. These delays further stem from a confluence of factors, including but not limited to, supply chain disruptions, regulatory changes, and difficulties in acquiring necessary permits and specialized labor. **OPA observes that the inherent complexity of converting or replacing existing aging infrastructure, alongside elongated turbine delivery times has rendered LADWP's ability to meet the December 31, 2029 deadline to comply with the State Water Resources Control Board's Once-Through-Cooling regulation at Scattergood increasingly unlikely.**

An investment of the proposed size, scale and importance at Scattergood will impact ratepayers and energy system planners for decades to come. As a result, LADWP bears a critical responsibility to be transparent to the Board and ratepayers about the potential financial impacts associated with project complexities and externalities – and what it will do in the event these complexities make the finances of the project untenable for ratepayers. By providing this level of transparency, LADWP not only fosters trust with its customer base but also empowers relevant stakeholders and ratepayers to understand the rationale behind large scale infrastructure investments, rate adjustments, engage in informed discussions about the future of the utility, and ensure LADWP maintains high accountability for its financial stewardship.

- **RECOMMENDATION:** OPA finds that the bids submitted for the SMP RFP will illuminate total project costs and necessary development timelines. Given the importance of this project to regional reliability, potential impact on rates, and regulatory compliance, **OPA recommends LADWP provide an interim briefing to the Board, and appropriate stakeholders,** with appropriate provisions for confidentiality and in alignment with city procurement policy, **once bids are submitted. This will help manage for potential cost and timeline overruns.**

[2] Current Energy Group, Development Timelines, Costs and Risk Factors for New Capacity Resources, August 2025 Update, 5.
[3] Current Energy Group, 2.

3. <u>The risk to market development and green hydrogen availability is high, which could undermine the ability of this facility to support LA100 goals</u>

First-of-a-kind technologies often require significant upfront investment before the market has fully developed. This is a calculated risk that is usually not possible to sidestep. Within its proposed investment at Scattergood, LADWP is sending an important signal to the green hydrogen markets by positioning Scattergood as a future offtaker of produced green hydrogen capacity. This commitment by the facility serves as a powerful catalyst, demonstrating a clear demand signal and encouraging further investment in the green hydrogen market development and infrastructure which can bring costs down.

By acting as an anchor offtaker, LADWP will help to de-risk the investment for green hydrogen producers, paving the way for wider adoption and scaling of this critical clean energy resource – and which can ultimately decrease hydrogen fuel prices upon which LADWP relies. It is important to note, since the SMP's proposed technology risk is relatively low—e.g. natural gas turbines are proven, and hydrogen blending has been demonstrated—its first-of-a-kind risks related to hydrogen are less technical and more focused on market maturity and development.

OPA recognizes the need for the SMP to maintain the power reliability in the region, however the challenges to developing a green hydrogen market are high. OPA is concerned about the cost of green hydrogen as an input fuel, the complexity of hydrogen transport, and the implications of federal grant funding cancellation.

Commonly used in the discussion of energy, the term willingness to pay (WTP) refers to the maximum price a consumer is willing to pay for a good or service. In the context of the LADWP's power system it represents the highest cost per unit of fuel (e.g., natural gas or green hydrogen) that LADWP is prepared to incur to maintain economic viability and reasonableness of rates. In the power system, where purchased fuel costs have a direct impact on rates, in the absence of some compelling need, there is typically a limited WTP for costs that are above market. This is a critical factor when considering the integration of alternative fuels like green hydrogen. **Currently, green hydrogen fuel costs, on a dollar per kilogram basis, are ~7-10x higher than the prevailing prices of natural gas, the incumbent fuel at Scattergood.**

To ensure transparency of upcoming Scattergood decisions, OPA asserts that LADWP should be transparent and realistic about the near-, medium-, and long-term costs and market risks of green hydrogen. For green hydrogen to become a viable and competitively priced fuel source for the energy, industrial and transport sectors, significant cost reductions are imperative. Without a substantial decrease in its cost, green hydrogen's adoption will remain constrained, despite its environmental benefits. **This cost delta remains a key concern of OPA since limited market uptake will erode market investments. Sustained market investments are key to ensuring the development of**

sufficient fuel volumes being available for Scattergood to blend hydrogen for cleaner combustion in the future.

LADWP is not planning to produce green hydrogen onsite. Instead, when the Scattergood facility is brought online during periods of grid stress it is estimated to use a significant volume of hydrogen per day, procured from third-party producers. At these large volumes, and given the intermittent use of the facility, it is most realistic for the hydrogen to be transported to Scattergood via pipeline. While pipeline infrastructure is not within the scope of the SMP, **OPA has concerns that if the plan for a hydrogen pipeline lacks adequate policy support to materialize or faces permitting challenges, the option to fuel Scattergood with green hydrogen may not become a reality and it will continue to operate as a natural gas power plant.**

On October 1, 2025, the US Department of Energy (DOE) cancelled the $1.2 billion grant for the ARCHES Hydrogen Hub, along with other grants for hydrogen production and market development. The federal funding for ARCHES was projected to serve as a significant catalyst and enabler to accelerate the development and deployment of clean hydrogen infrastructure across the region. **However, OPA expects this market development to shift, not cancel California and Los Angeles' commitment to integrate green hydrogen into decarbonization plans**. While the DOE funding was $1.2 billion, over $10 billion in private sector cost share remains committed to ARCHES. The CEO of ARCHES, Angelina Galiteva, commented "the ARCHES ecosystem and marketplace will continue to advance in collaboration with state leaders and private sector innovators."[4]

Through the LA100 Plan, LADWP has commented on the impacts to ratepayers, total supply costs and emissions if there is a limited or no market for green hydrogen. The presentations to the Advisory Group on March 20, 2025, and May 15, 2025, reflect these findings.[5] However, **OPA urges LADWP to develop prompt and thorough commentary on any cost implications to ratepayers from the loss of $100 million in anticipated funding from ARCHES**. While OPA recognizes DWP's commitment to moving ahead with the SMP regardless, understanding any financial impacts from the cancellation of ARCHES funding is essential for informed decision-making, transparent communication with ratepayers, and the strategic resilience of SMP.

- **RECOMMENDATION:** Given the importance of this project to regional reliability, decarbonization, and regional energy development, **OPA recommends LADWP maintain, and if needed increase its role in regional green hydrogen market development efforts. OPA further recommends LADWP provide periodic reports to the board on regional green hydrogen production (e.g. volumes, costs, relevance to the Scattergood Generating Station, etc.) and LADWP's role therein.**

[4] Press Release, ARCHES CEO Angelina Galiteva on DOE's decision to cut federal funding for California hydrogn hub, October 1, 2025.
[5] Los Angeles Department of Water & Power, LA100 Plan, 2025 AG Meetings, Presentations & Reports.

LOOKING FORWARD:

The Modernization of Scattergood is a major project for both LADWP and the City of Los Angeles and should address the defined need while maximizing benefits to ratepayers. OPA provided analysis adds transparency at this stage in the process related to costs and potential project risks that can inform the Board's decision.

Notwithstanding LADWP's decision on the project, going forward, additional capacity brought on to the grid at Scattergood should not preclude investments in other infrastructure and decarbonization technologies across the region. Additionally, leveraging cross-departmental partnerships to reduce and manage load at facilities such as LAX, Hyperion and the Port of Los Angeles will be important to efficiently utilize Los Angeles' in-basin resources and reduce the need for backup power. Lastly, as LADWP moves forward with updates to its LA100 modeling, transparency around assumptions such as facility requirements and capacity factors will be crucial to maintain an ongoing and transparent dialogue with the ratepayers of Los Angeles.

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