



CUSTOMERS FIRST

Scattergood Generating Station Units 1 and 2 Green Hydrogen-Ready Modernization Project

California Environmental Quality Act
Draft Environmental Impact Report Public Meeting
Wednesday, November 20, 2024, 7:00 PM

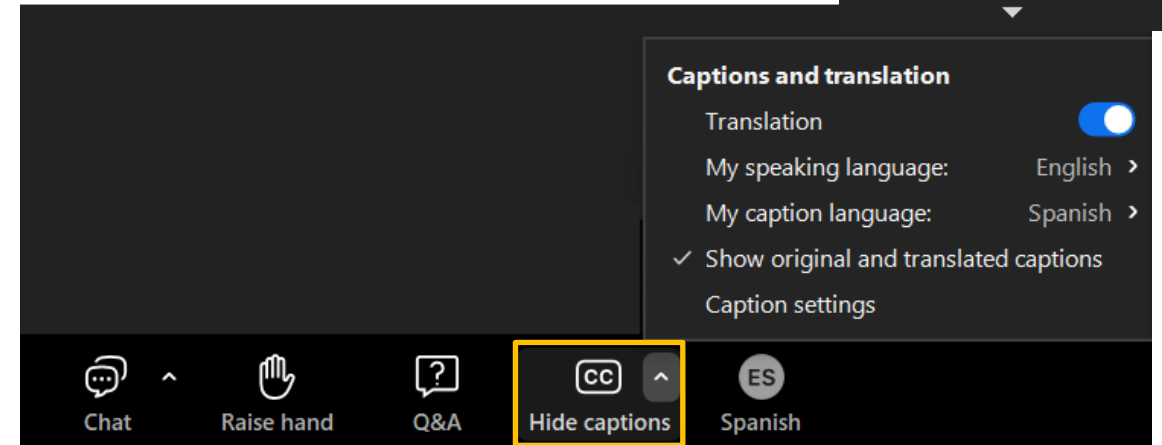
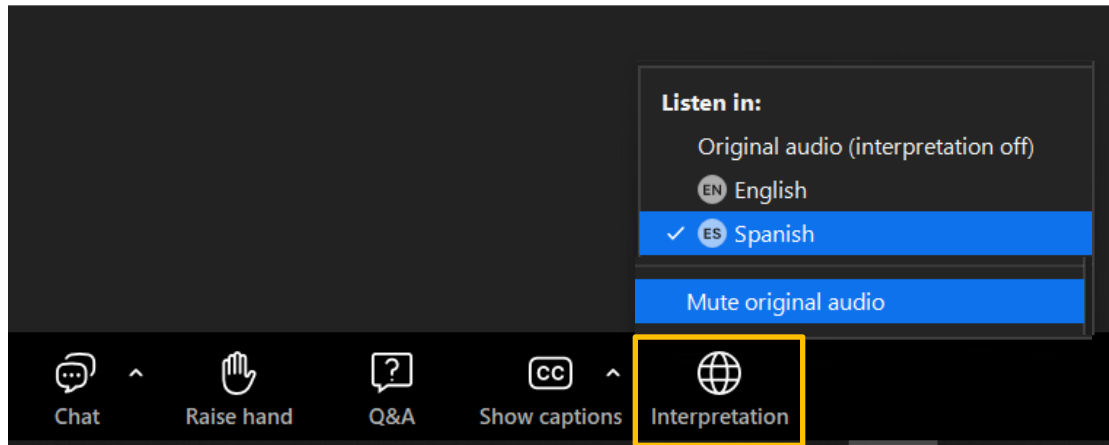
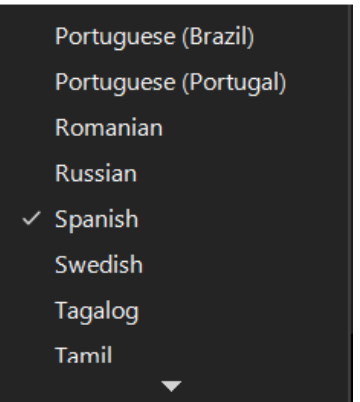
Spanish Interpretation and Closed Caption / Interpretación en Español y Subtítulos

Spanish Interpretation / Interpretación en español

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- Choose/Elige **Spanish**
- Toggle/Alternar **Mute Original Audio**

Closed Captions / Subtitulos

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Las opciones solo están disponibles a través de la plataforma Zoom

Agenda

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General Meeting Information and Purpose

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LA100 Study Recap and Latest Accomplishments

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CEQA Environmental Review Process and Draft EIR Analyses

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Public Comments

General Meeting Information and Purpose

General Meeting Information



Meeting will be recorded to give LADWP the ability to reference commentary made during comment period



Meeting attendees will be muted for the duration of the presentation



Moderator will facilitate comments and questions at the conclusion of the presentation

Draft EIR Public Meeting Purpose



Provide information on LADWP Power System, LA100 study, and recent accomplishments



Give an overview of the proposed project



Provide overview of the CEQA environmental review process, draft EIR preparation, environmental impact analysis and mitigation measures for the proposed project



Solicit public comments

LADWP Speakers



Nermina Rucic-O'Neill
Director
Power System Planning



Jazmin Martin
Environmental Specialist
Environmental Planning and Assessment

LA100 Study and Latest LADWP Accomplishments

LADWP Power System Overview

Largest Publicly Owned Utility in the U.S.

1.5 Million Billed Customers

Vertically Integrated

\$5.5 Billion Annual Budget

- \$1.7 billion operations & maintenance
- \$2.2 billion capital projects
- \$1.6 billion fuel and purchased power

Peak Demand of 6,502 MW on August 31, 2017

Distribution System

- 11,104 miles of overhead & underground cables
- 311,272 distribution utility poles
- 178 distribution substations

Transmission System

- 4,040 miles of overhead transmission circuits spanning five Western states
- 135 miles of underground transmission circuits

Generation System

- Over 10,000 MW of total generation resource capacity
- Forecasted nearly 66% carbon free energy with 49% RPS for 2024



Recent Accomplishments and Updates

1

Clean-Energy Progress: Near 60% carbon-free energy with 43% renewables (in 2023)

- Red Cloud (331 MW wind facility) commissioned in late 2021
- Eland 1 now in operation/commissioning (200 MW solar + 600 MW-hr battery)
- Eland 2 expected online in Q1 2025 (200 MW solar + 600 MW-hr battery)

2

Transmission and Distribution System Upgrades: Investing \$1.8 billion in transmission system upgrades to improve ability to **import renewables**; over \$1.3 billion in distribution system upgrades to improve **system resilience** during heat storms and other stressed-grid conditions, while preparing for system **load growth and electrification**

3

Distributed Energy Resources: Upcoming Request For Proposal (RFP) will result in **\$1+ billion** in investments toward distributed energy resources to **maximize local sustainability and resilience**

4

Local Solar: Achieved approximately **750 MW** of local solar, with a target of over 2,200+ MW by 2035.

5

Demand Response: Currently evaluating vendor proposals for deploying **300 MW** of demand response to **reduce strain on the electric grid** during peak-load conditions



Recent Accomplishments and Updates

6

Energy Efficiency: Achieved **15% energy reduction** through various customer programs and plans to achieve an **additional 15% energy reduction** over the coming decade. Programs will provide **cost-savings to customers**, particularly the most vulnerable

7

Electric Vehicle Infrastructure Deployment: Targeting **45,000 charging stations** by 2025 and 120,000 by 2030, with plans to build EV Hubs, **accelerating the transition** to electric vehicles, especially for low-income and disadvantaged communities **greatly improving air quality and health**

8

Building Electrification: LADWP has introduced new building electrification Business Offerings for Sustainable Solutions (BOSS) Programs lowering the overall cost of electrifying, which will **accelerate building electrification and improve air quality and health**

9

Intermountain Power Project (IPP) Renewed Project: First-of-a-kind green hydrogen ready power generation project slated for commercial operation by mid-2025, **eliminating millions of tons of CO₂** and **freeing 1,000 MW+ of transmission capacity** for renewable imports to LA

10

Grant Funding: LADWP applied for more than **\$4 billion** in federal, state, and local grants and was awarded \$59 million, with an additional \$150 million in negotiations, **reducing cost impacts of the clean-energy transition for ratepayers**



NREL identified required investments across all LA100 scenarios



Customer Programs



Renewable Energy

Solar: + >5,700 MW
Wind: + >4,300 MW

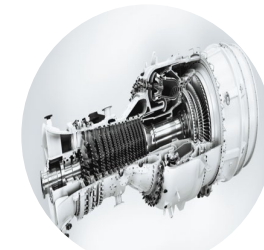


Energy Storage

+ >2,600 MW



Transmission, Distribution

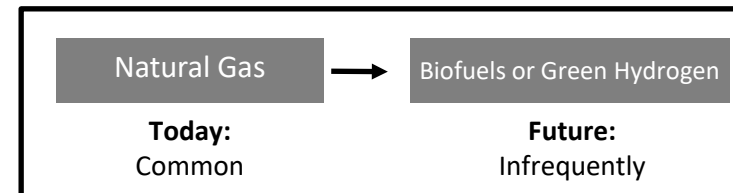


Renewably Fueled Dispatchable Turbines

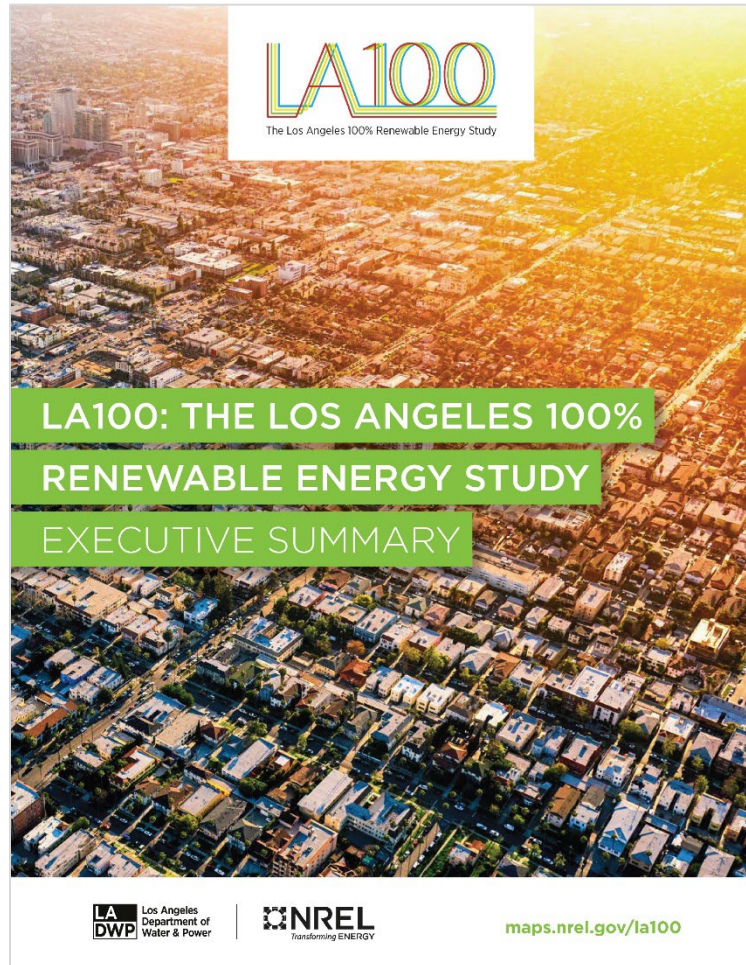
+ >2,600 MW (in-basin)

Much More

While renewables and energy storage are essential, they alone cannot achieve full decarbonization of a reliable electric grid.



In LA100, NREL concluded that LADWP will continue to need firm capacity in the Los Angeles Basin; without firm capacity the system is not reliable



“

New in-basin, renewable **firm capacity**—resources that use renewably produced and storable fuels, can come online within minutes, and can run for hours to days—will become a **key element of maintaining reliability**.

”

—National Renewable Energy Laboratory
The Los Angeles 100% Renewable Energy Study

- NREL identified **significant reliability concerns** in a *no-combustion* scenario
- NREL found challenges with “supplying the in-basin resources required to serve load during times of **system stress**”

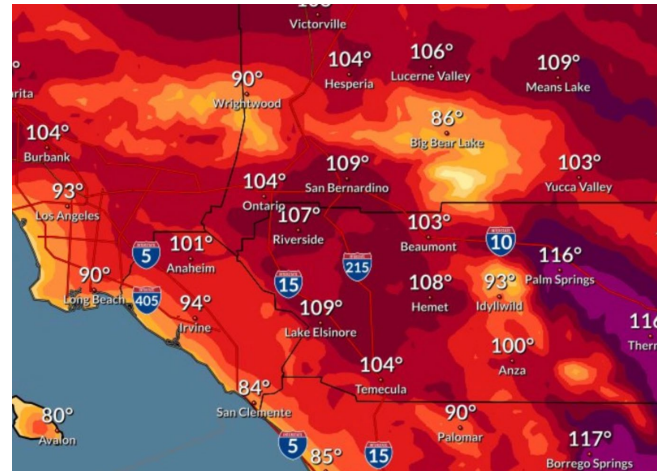
LADWP's in-basin firm generation provides resiliency for the expected and the unexpected

Continuously provides
grid resiliency
during emergency situations



The 2019 Saddle Ridge Fire led to a long-lasting outage over multiple transmission corridors

Reliably provides firm and
dispatchable energy at any given
time



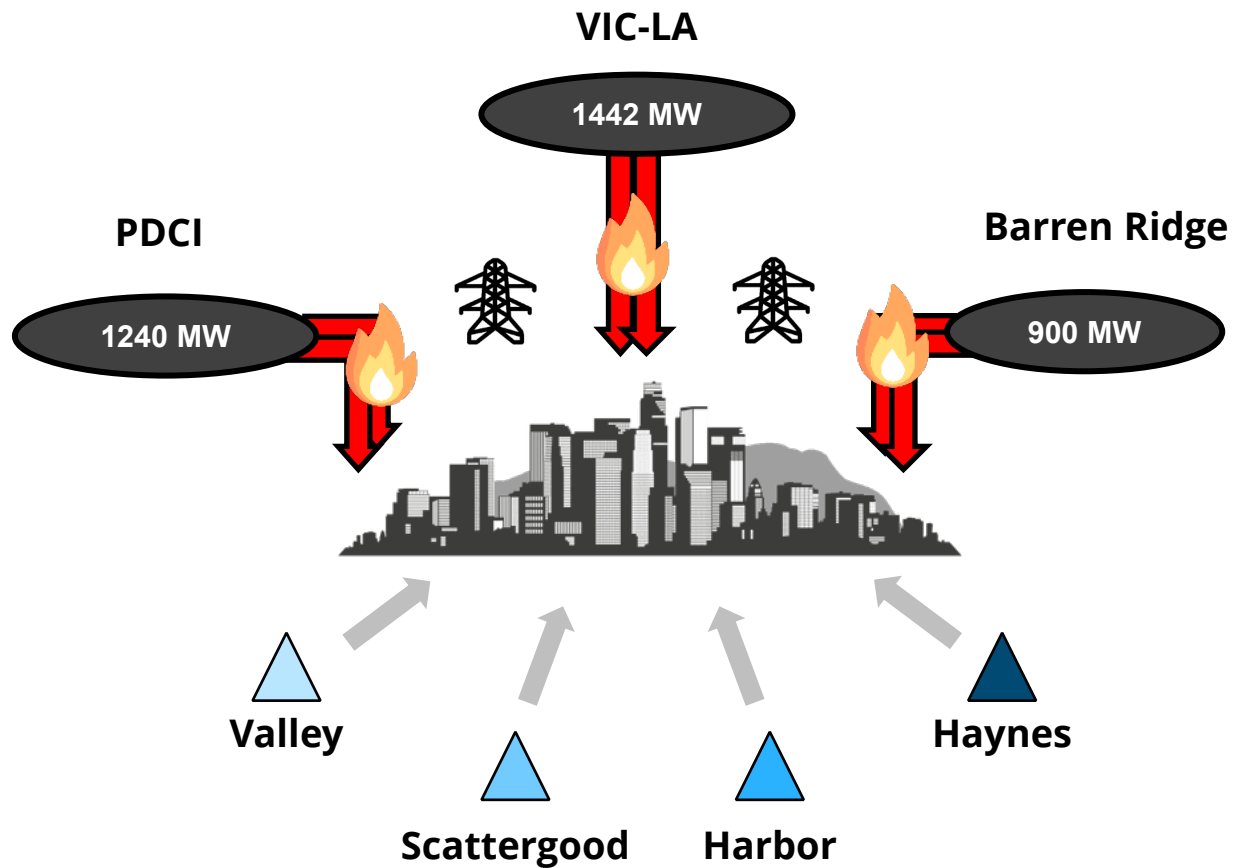
2020 California rolling blackouts affected over 300,000 customers. LADWP's service territory was unaffected due to 900 MW of in-basin generation capacity

Complements shortfalls and
surpluses of intermittent
renewable resources



Unusually low wind speeds caused U.S. wind generation to slump by more than 4.5% over the first eight months of 2023 from the same period in 2022

A real-world example: The Saddle Ridge Fire of 2019 caused outages for over 3,500 MW of transmission, reducing electrical import capabilities by ~45%



In-basin capacity must be maintained for **reliability and resiliency**, even in a decarbonized electric system.

September 2024 Heat Storm demonstrated the critical need of local, in-basin generators to meet system demand for prolonged periods

- Widespread customer **power outages across utilities** due to excessive heat placing significant strain on the regional electric grid
- Renewable Generation alone is unable to sufficiently supply energy needs during stressed conditions, **local firm dispatchable generation will be critical for reliability**
- Nearly **60% of LADWP's electric capacity was provided by in-basin firm capacity generators** which **avoided load-shedding and blackouts** for approximately **1.2 million homes** during this storm

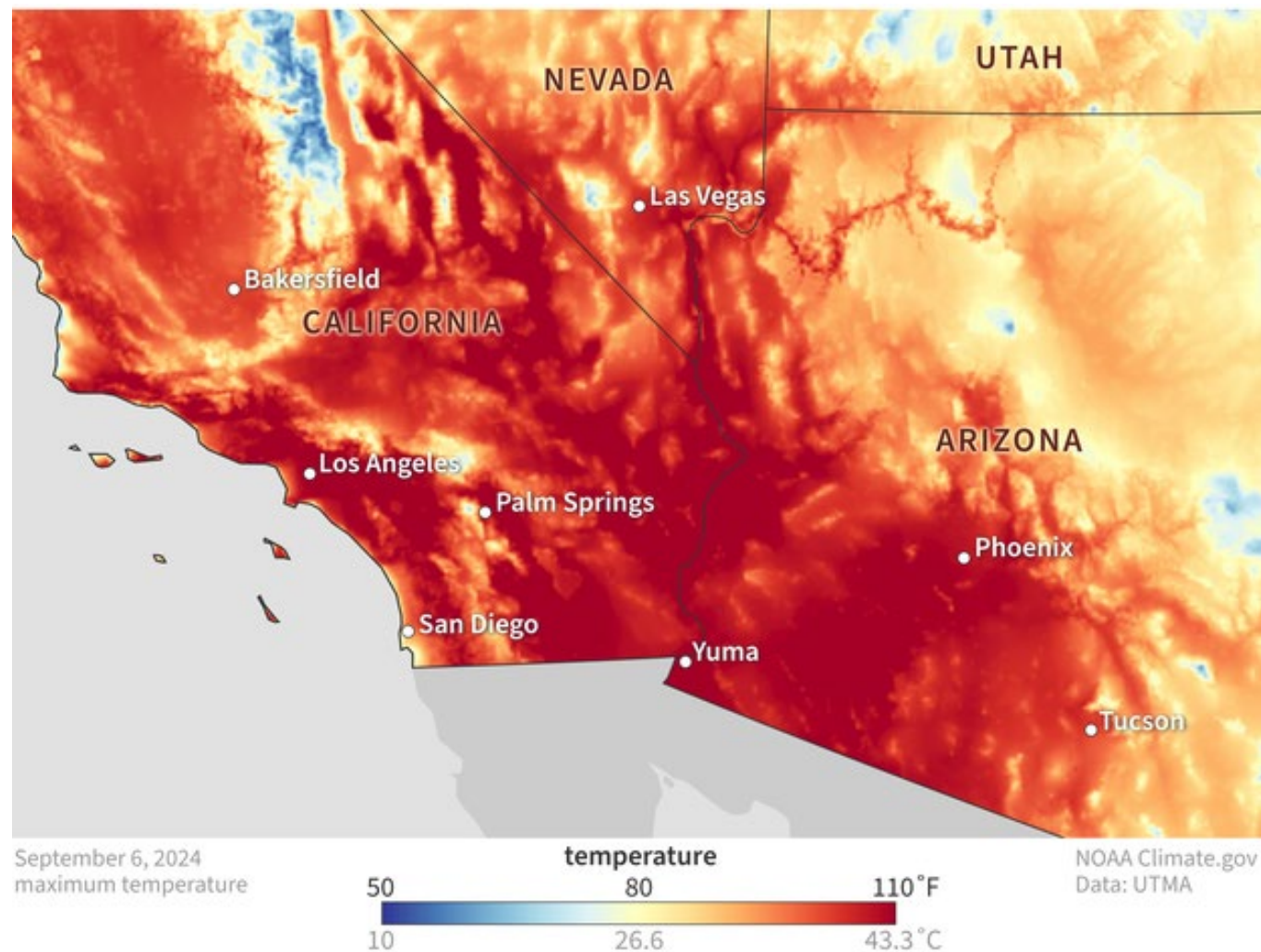
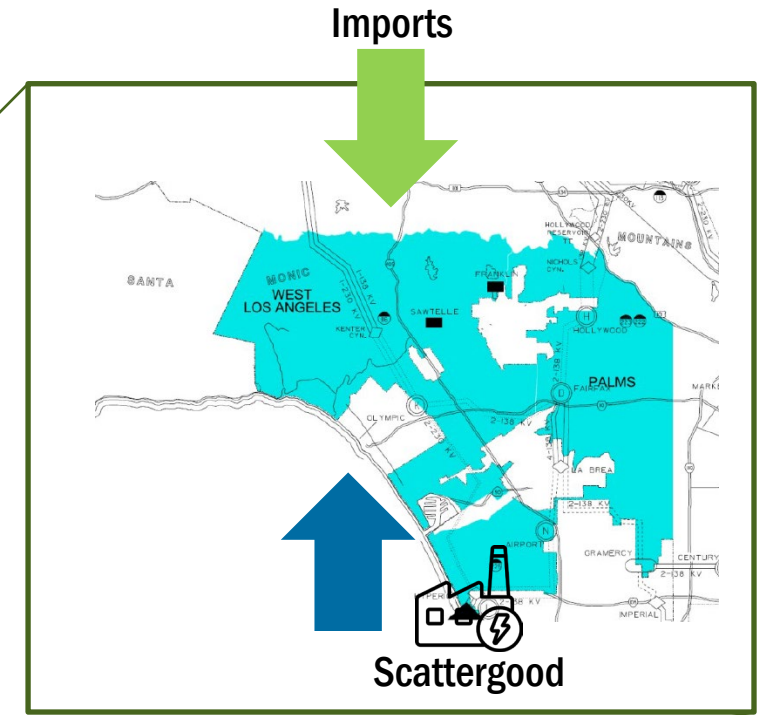
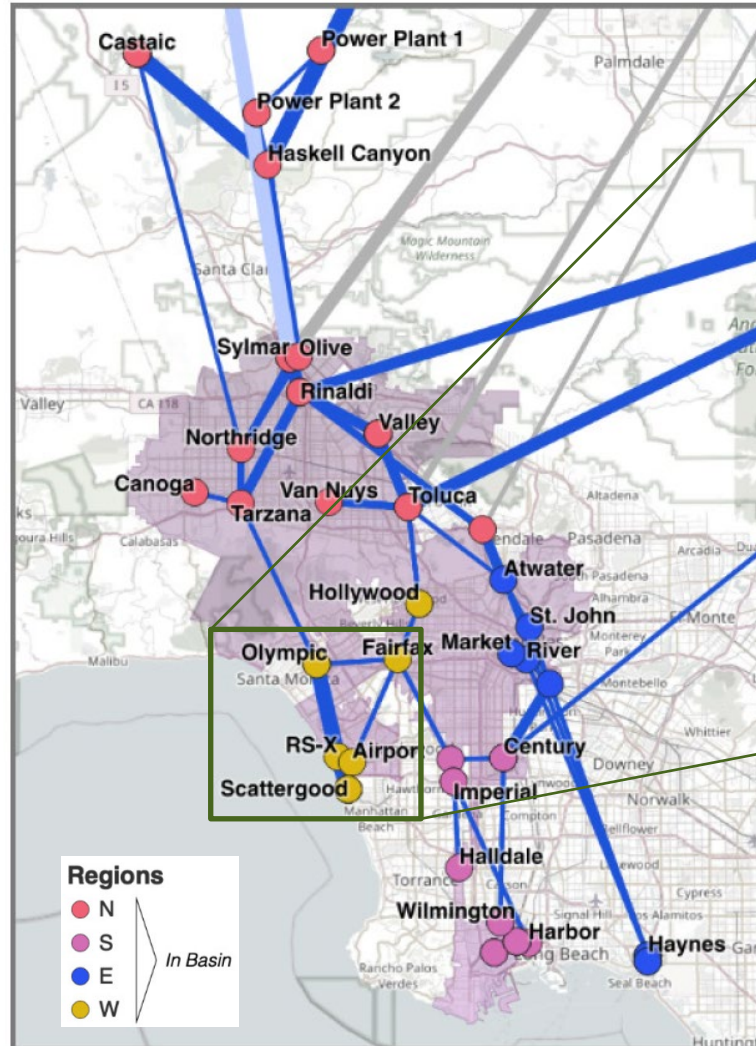


Image Credit: NOAA Climate.gov

Firm capacity at the generating stations critically bridge power shortfalls, and ensures LADWP meets regulatory requirements

- Scattergood generation critically supports westside load due to transmission import limitations
- Statewide once-through cooling policy forces the retirement of Scattergood Units 1 and 2 by 2029, thus creating capacity deficit
- Failure to retain this capacity will severely impact a quarter million of westside customers including LAX, Hyperion, UCLA
- Inaction will result in imminent blackouts and load shedding on the westside during stressed grid conditions

Inaction and failure to retain Scattergood capacity will result in imminent blackouts and load shedding on the westside



Credit: LA100 Study

Scattergood Modernization Project Overview and Updates

Scattergood Generating Station Units 1 and 2 Green Hydrogen-Ready Modernization Project



OTC Retirement of Unit 1 and 2 by December 2029.
Modernization project in-service in late 2029



Up to 346 MW of capacity



Far more efficient generation and reduced emissions



Discontinues the use of ocean water, once-through cooling



Maintains grid reliability and resiliency, particularly for large customers and households on system's westside



Capable of blending 30% green hydrogen and 70% natural gas, with 100% green hydrogen capability expected by 2035



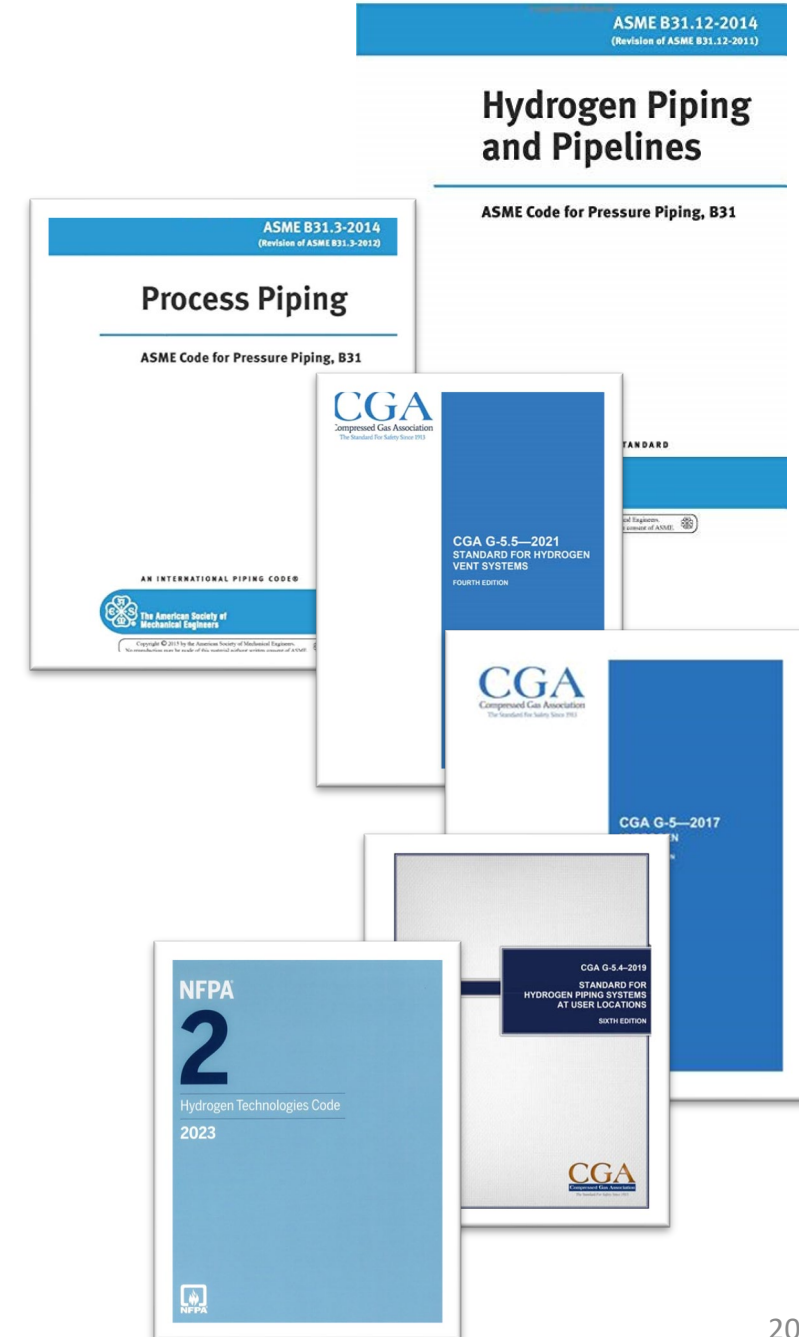
Selected as an ARCHES sub-recipient for a federal award of \$100 million, demonstrating large-scale power generation using green hydrogen.

Scattergood Units Hydrogen Safety Codes & Standards

Key Codes and Standards

- **ASME B31.12:** Hydrogen Piping and Pipelines
 - Specific guidance for hydrogen piping systems, including material selection, welding, inspection, testing, etc.
- **CGA G-5.4 & G-5.5:** Standard for Hydrogen Piping Systems at User Locations
 - Details design criteria for piping materials, system components, electrical equipment, etc.
- **NFPA 2:** Hydrogen Technologies Code
 - Safeguards for the generation, installation, piping, use, and handling of hydrogen
- **NFPA 55:** Compressed Gases and Cryogenic Fluids
 - Safety measures for compressed gases and standoff distances

ASME = American Society of Mechanical Engineers
CGA = Compressed Gas Association
NFPA = National Fire Protection Association

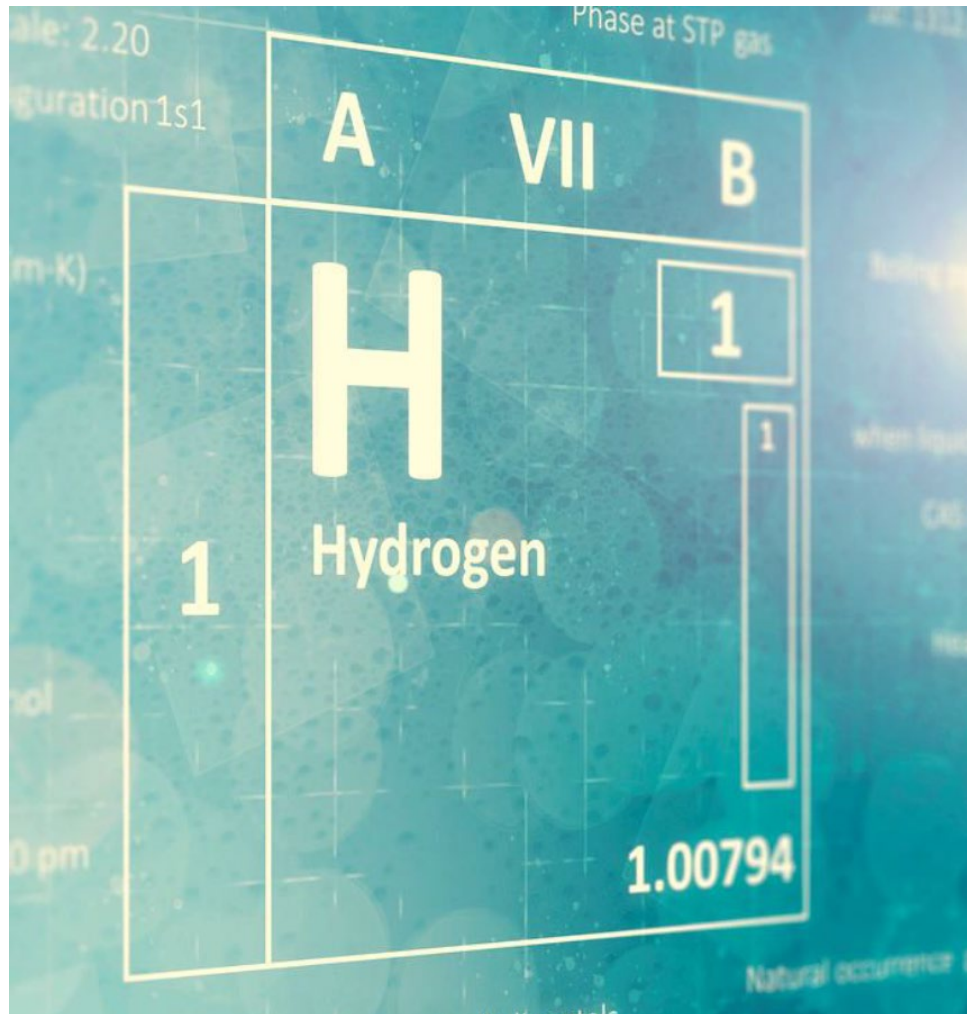


Hydrogen can be safely utilized onsite through proper design, advanced sensors, and comprehensive procedures

- **Safety by design:**
 - Application of latest codes & standards
 - Utilization of appropriate materials and sizing
 - Minimize possible leak points (e.g. welded connections)
- **Advanced hydrogen sensors:**
 - Acoustic and ultrasonic leak-detection sensors
 - Optical and thermal leak-detection sensors
 - Handheld hydrogen detectors
- **Other important safety elements include:**
 - Established **safety culture**
 - Robust operating, inspection, and maintenance **procedures**
 - Training and workforce **development**



The Scattergood Green Hydrogen-Ready Modernization Project will prioritize safety throughout all phases of project development, design, construction, commissioning and operations



Scattergood proposals require the contractor to provide specific details on the integration of hydrogen safety into their design along with proper training



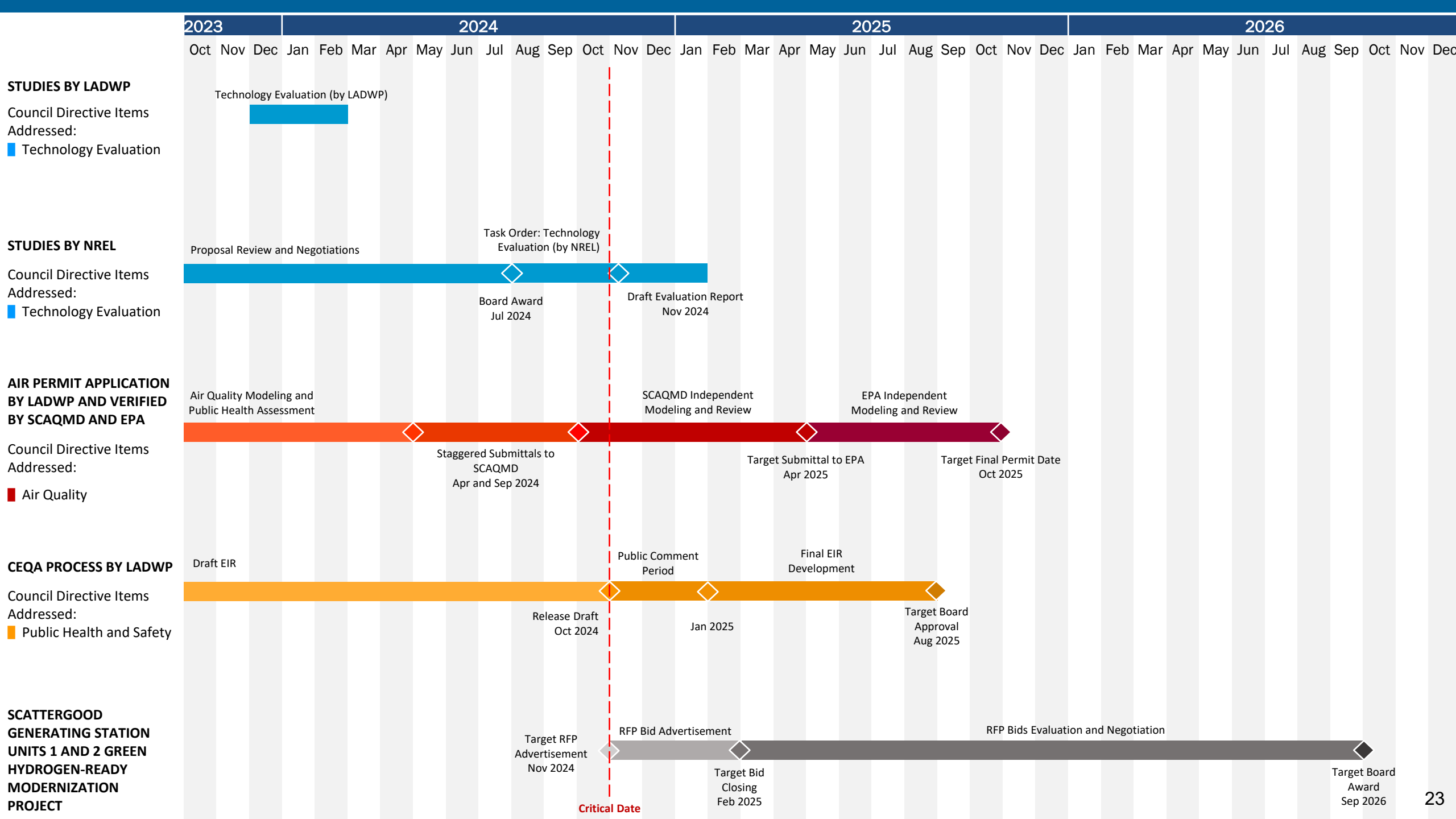
LADWP and its contractors will implement the most advanced sensor technologies available to prevent, detect, and address hydrogen leaks as early as possible



Safety will be prioritized throughout the project design process



Robust engineering controls, regular inspection procedures, and application of all applicable safety codes & standards

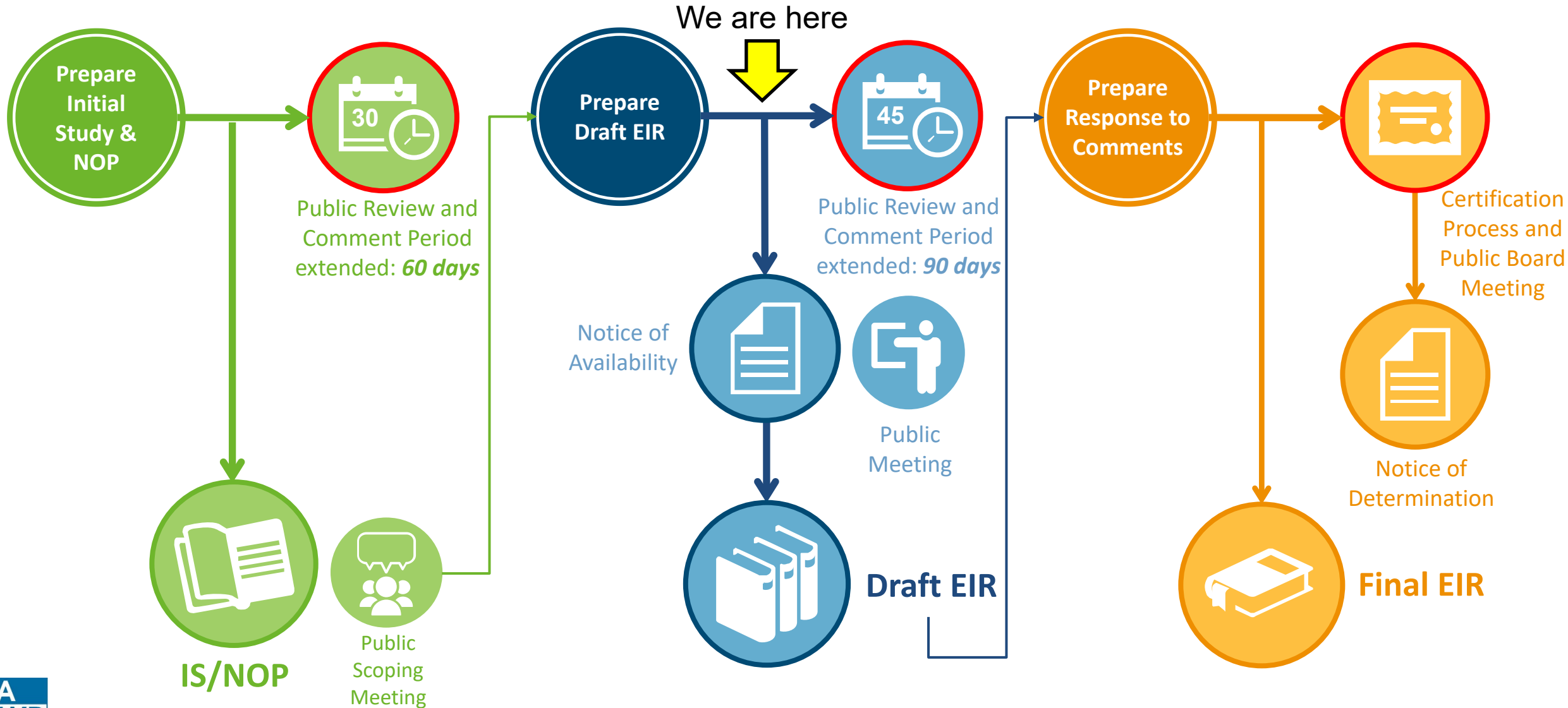


CEQA Environmental Review Process and Draft EIR Analyses

CEQA Overview

- CEQA is a California law requiring public agencies to evaluate and disclose potential environmental impacts of a project
- Initial Study conducted to determine if the project may have a significant effect on the environment
- Draft EIR prepared to analyze the potential impacts of the proposed project, focused on effects determined to be significant
- Where feasible, mitigation measures are developed to minimize significant effects
- Evaluation of and response to comments on environmental issues
- Preparation and certification of Final EIR

CEQA EIR Process



Contents of an EIR

- Analysis of environmental impacts of the project and discussion of significant environmental effects
- Mitigation measures proposed to minimize significant effects
- Consideration of alternatives to the proposed project
- Discussion of cumulative impacts
- Disclosure of significant and unavoidable impacts

Project Objectives

- Provide resilience to maintain reliability of the LADWP electrical power system
- Establish a dispatchable, always available, local generation source
- Provide generation capacity to support grid stability and energy demand in the Scattergood service area
- Reduce greenhouse gases emissions and transition to carbon-free electrical power system



Environmental Factors Covered under CEQA



Aesthetics



Agriculture and Forestry Resources



Air Quality



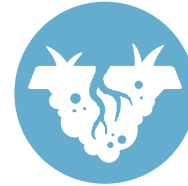
Biological Resources



Cultural Resources



Energy



Geology and Soils



Greenhouse Gas Emissions



Hazards and Hazardous Materials



Hydrology and Water Quality



Land Use



Mineral Resources



Noise



Population and Housing/ Growth



Public Services



Recreation



Transportation



Tribal Cultural Resources



Utilities and Service Systems



Wildfire

Environmental Factors Covered under CEQA



Aesthetics



Agriculture and Forestry Resources



Air Quality



Biological Resources



Cultural Resources



Energy



Geology and Soils



Greenhouse Gas Emissions



Hazards and Hazardous Materials



Hydrology and Water Quality



Land Use



Mineral Resources



Noise



Population and Housing/Growth



Public Services



Recreation



Transportation



Tribal Cultural Resources



Utilities and Service Systems



Wildfire

CEQA – Draft EIR Environmental Impacts Analysis

Construction Analysis

- Most factors analyzed were under thresholds of significance established under CEQA or other guidelines
- Impacts to **Aesthetics, Greenhouse Gas Emissions, Noise, and Wastewater** were determined to be less than significant
- Impacts to **Biological Resources, Geology and Soils, Hazards and Hazardous Materials, and Tribal Cultural Resources** were determined to be less than significant with mitigation measures implemented
- Impacts to **Air Quality** during generator commissioning phase could exceed CEQA thresholds of significance for VOCs, CO, and NOx

Operations Analysis

- Most factors analyzed were under thresholds of significance established under CEQA or other guidelines
- Impacts to **Air Quality** during normal operation of the CCGS could exceed CEQA threshold of significance for VOCs for one of the three vendors considered

All other pollutants (i.e. CO, NOx, SOx, PM10, PM2.5) fell below significance thresholds for operation

CEQA Impacts and Mitigation Measures – Air Quality

Construction and Commissioning

- Construction-related impacts associated with NOx emissions were determined to be reduced with the implementation of the following mitigation measure:
 - MM-AQ-1: Tier 4 Final Engines required for offroad construction equipment greater than 80 horsepower
- Emissions during the generator commissioning phase of the proposed project could exceed the CEQA significance thresholds for VOCs, CO, and NOx at the stack
 - Commissioning phase consists of testing and tuning equipment for peak performance and optimal installation of pollution control systems

Operation

- Emissions during operations of the proposed project could exceed the CEQA significance thresholds for VOCs for one of the three vendors considered
 - Impacts are based on proprietary emissions rate data provided by each vendor, specific mitigation measures cannot be applied

Construction and Operation of the CCGS would comply with South Coast AQMD Permit Conditions, Emissions Limits and Requirements

CEQA Impacts and Mitigation Measures – Biological Resources

- Impacts to Biological Resources during construction were determined to be less than significant with implementation of the following mitigation measure:
 - MM-BIO-1: Nesting Bird Surveys by qualified biologist prior to construction, monitoring and appropriate avoidance buffers and/or adaptive measures if active nests are found.



CEQA Impacts and Mitigation Measures – Geology and Soils

- Impacts to Geology and Soils during construction were determined to be less than significant with implementation of the following mitigation measure:
 - MM-GEO-1: Paleontological Monitoring by a qualified paleontologist to monitor ground disturbing activities in undisturbed geologic contexts with potential to contain significant paleontological resources. Monitoring may be modified based on site conditions and if any paleontological finds or fossils are recovered, appropriate treatment measures will be implemented.



CEQA Impacts and Mitigation Measures – Hazards and Hazardous Materials

- Impacts to Hazards and Hazardous Materials during construction activities were determined to be less than significant with implementation of the following mitigation measures:
 - MM-HAZ-1: Soil/Sediment Management Plan would require sampling and include strategies for management of contaminated soils if encountered during excavation, as well as preparation of a project-specific Health and Safety Plan.
 - MM-HAZ-2: Waste Management Plan would be developed to address non-soil/sediment wastes that may be encountered or generated during the proposed project to ensure proper handling and disposal/recycling.



CEQA Impacts and Mitigation Measures – Tribal Cultural Resources

- Impacts to Tribal Cultural Resources were determined to be less than significant with implementation of the following mitigation measures.
 - MM-TCR-1: Cultural Resources Awareness Training to be provided to all field staff and construction workers prior to any ground-disturbing activities
 - MM-TCR-2: Inadvertent Discovery of a Tribal Cultural Resource establishes procedures for contacting all consulting tribes for preparation of treatment plan for the resources



Project Alternatives Evaluated in DEIR

- **Alternative 1: No Project**
 - Would result in loss of generation capacity and not fulfill objectives for establishing a resilient, reliable, always available, and dispatchable generation source which could lead to outages in the Scattergood service area
- **Alternative 2: Energy Storage**
 - Installation of a Battery Energy Storage System would not provide comparable generation capacity for extended periods and would require substantially more space than that available at Scattergood
- **Alternative 3: Green Hydrogen Powered Fuel Cells**
 - Unproven technology at the scale required to replace the proposed project generation capacity, limited fuel flexibility, shorter lifespan, and requires substantially more space than that available at Scattergood
- **Alternative 4: Eliminate Vendor B**
 - Technically feasible and meets all project objectives. Operational air quality impacts associated with peak VOC emissions would be reduced, other impacts would be the same as the proposed project
 - Determined to be the environmentally superior alternative

Additional Alternatives Considered but Dismissed from Detailed Analysis

- Alternative In-Basin Clean Energy Generation
- Increase Demand Side Management Programs
- New and Upgraded Transmission Lines
- Retrofit Unit 1 and/or Unit 2
- Develop Proposed Project at Alternative Location

These alternatives were dismissed from further evaluation due to infeasibility, failure to meet project objectives for firm, dispatchable electrical energy to provide reliability and resilience under all circumstances, and/or inability to avoid or lessen significant environmental impacts

CEQA Timeline



● Opportunities for public input

Public Comments

Submitting Written Comments

Please direct written comments to:

MAIL Los Angeles Department of Water and Power
Corporate Environmental Affairs
Environmental Planning and Assessment
Attn: Jazmin Martin
111 N. Hope Street, Room 1044
Los Angeles, CA 90012

EMAIL Scattergood_CEQA@ladwp.com

Submitting Verbal Comments

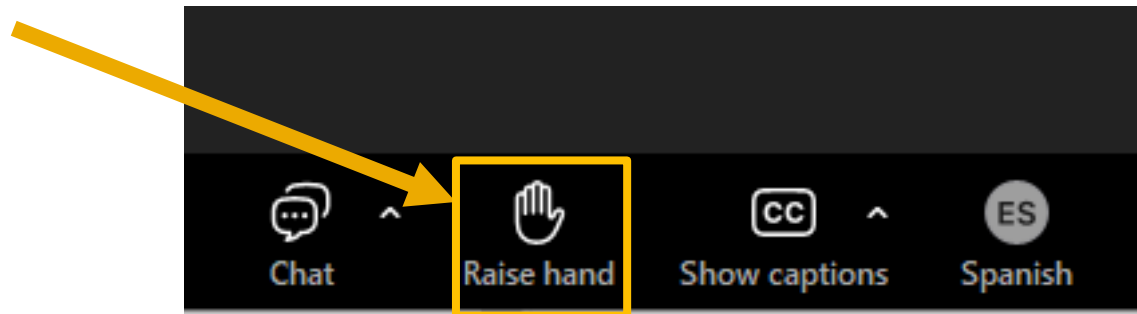


- State your full name and affiliation
- Provide your comment
 - Please limit comments to 2 minutes or less

Note: if you submit a comment, your contact information may be included as part of the public record

How to Participate – Zoom (Web)

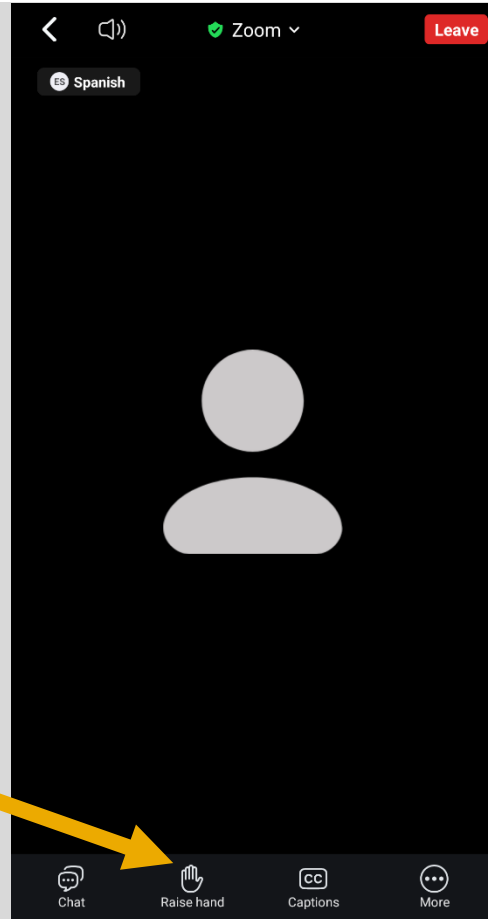
- Provide verbal comments via Zoom (computer) audio:
 - Select the Raise Hand button from the toolbar
 - Host will unmute you when prompted to provide comment



How to Participate – Zoom (Phone)

Mobile App

Raise hand if you would like to make a comment



Phone Audio

- Dial *9 to raise and lower hand

Host will unmute you when prompted to provide comment

Public Comment Period

- State your full name and affiliation
- Provide your comment

Phone Audio:

*9 to raise/lower hand

Written Comments via Email:

Scattergood_CEQA@ladwp.com

Project Website:

www.ladwp.com/ScattergoodModernization

Public Comment Period:


October 31 –December 20, 2024*

***Extended to January 29, 2025**

Time Remaining

00:00

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Thank You For Joining Us!

Please direct written comments to:

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Public Comment Period: October 31 – December 20, 2024*

***Extended to January 29, 2025**