SCATTERGOOD GREEN HYDROGEN CAPACITY

DWP MOU/ADVOCACY COMMITTEE MEETING BRIEFING

FEBRUARY 4, 2023

Proposed Resolution and Ordinance

Competitive Seal Bid Proposal Method

- **Charter Section 371(b) -** Establish criteria by ordinance authorizing LADWP to use a competitive sealed bid proposal method
- Award in whole an Engineer-Procure-Construct or design-build contract
- **Charter Section 674** – Allows LADWP Board to let a 5-year term contract for a project transmitting electrical energy.

LA100

ACHIEVING 100% RENEWABLE ENERGY IN LOS ANGELES

LA DWP

LA100 Study

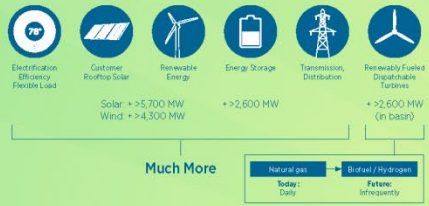
Completed

Unprecedented analysis ID'd multiple paths to achieve 100% target

Considers reliability, equity, sustainability and affordability

- Confirmed 100% by 2035 achievable
- Community & stakeholder input

Common Investments Across All Scenarios



LA100 Equity Strategies

Fall 2021-23

Community-driven, objective to achieve equity

Robust community engagement

Areas of Focus

- Improve air quality
- Solar access
- Energy Efficiency
- Affordable rates
- Demand management
- Debt relief
- EV charging access

2022 SLTRP

Fall 2021-2022 | 2035 & 2045 Targets

Our comprehensive integrated power plan

Recommends path forward to achieve our goals

- Integrates findings of LA100
- Community & stakeholder input
- Prioritizes reliability, resiliency, equity, affordability, sustainability

Considerations

- Workforce
- Building, Operating & Maintaining
- Cost to customers
- Supply Chain Risk
- Implementation and Feasibility

LA100 Investments – NREL Study Concludes

Electrification
Efficiency
Flexible Load

Customer
Rooftop Solar

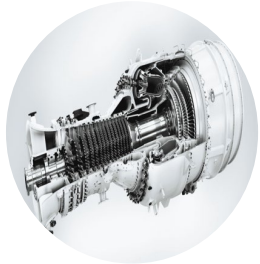
Renewable
Energy

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

Storage

+ >2,600 MW

Transmission,
Distribution



Renewably Fueled
Dispatchable
Turbines

+>2,600 MW
(in basin)

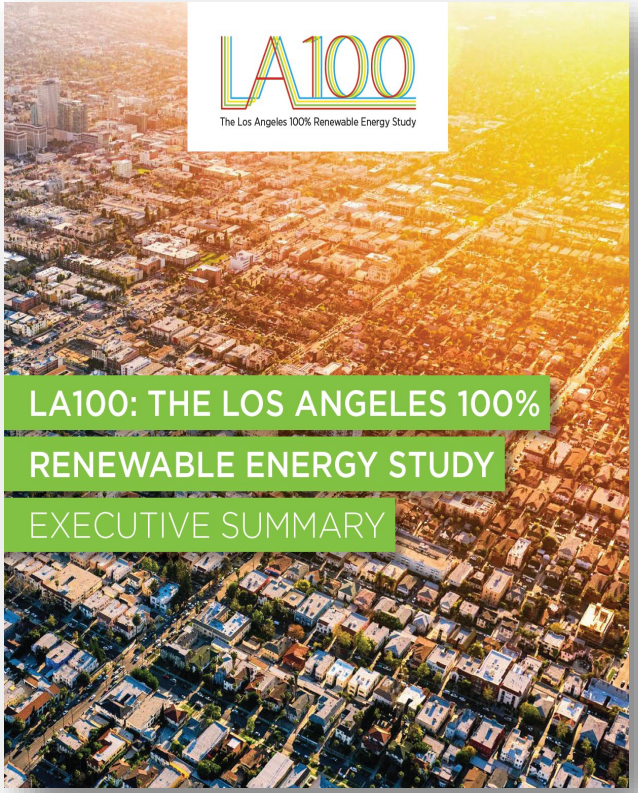
Much More

Natural Gas → Biofuel/ Hydrogen	
Today: Daily	**Future:** Infrequently

Hydrogen's Role in 100% Carbon Free

Why Invest in Renewably Fueled Turbines if Infrequently Used in the Future?

- **"The challenge of addressing the seasonal mismatch of supply and demand.** Demand peaks in August and September, but wind and solar generation peaks earlier in the year."
- "The risks associated with relying on transmission lines to bring wind and solar energy to the city. **Fires and earthquakes could affect these transmission lines, so LA needs to have energy that can be stored locally that can produce electricity for extended periods of time when needed**."
- "The limitation of the city's local transmission network— it is difficult and expensive to upgrade transmission infrastructure that could help import renewable energy through the north side of the LA system to other locations in the city."
- LA100 Study report, Executive Summary, pg. 29



Project Alternatives: LA100 on No Combustion

- Through the LA100 process, NREL attempted to model a scenario without in-basin combustion
- This scenario resulted in the following outcomes
  - Increased out-of-basin combustion by approximately 1,600 MW (i.e. new power plants)
  - Required 14 square miles of ground mounted solar (in addition to needed rooftop solar)
  - New in-basin transmission; 5 new in-basin transmission lines
- This no-in basin combustion scenario resulted in the inability to serve load (i.e. maintain reliability) during low frequency, high impact events such as wildfires, earthquakes, and heat storms
- These findings were communicated through the LA100 Advisory Group process as well as through LADWP's most recent Strategic Long-Term Resource Plan (SLTRP) Advisory Group process

Green Hydrogen Capacity at Scattergood

- **Transforming local generation.** LA100 study shows need for renewable in-basin capacity at all generating stations, in all scenarios.
- **System reliability.** Capacity at Scattergood is our most immediate need.
- **Load growth.** Port & LAX electrification, Operation NEXT at Hyperion.
- **Challenges**. Limited footprint and in-service prior to retirement of Units 1 & 2 to support transmission buildout.
- **OTC extension critical.** Scheduled for 2024, seek extension to 2029. Net reduction in water use with early elimination of water usage at Haynes.

Equity: Reducing Use of Valley Generating Station

- LADWP to dramatically reduce utilization of Valley Generating Station:
  - Today Valley is utilized 30% of the time
  - The combination of **80% renewables** by 2030, **Haynes recycled water cooling,** and **Scattergood capacity** reduces Valley usage

- Utilize significant space at Valley Generating Station for future clean energy projects

Scattergood Modernization

Scattergood Modernization Project Overview

- Combined Cycle and Balance-of-Plant Equipment
- 346 megawatts (MW) capacity
- Hydrogen Ready
- Estimated Cost: $800M
- In-Service Date: 12/30/2029

QUESTIONS