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# LOS ANGELES

# 100% RENEWABLE ENERGY STUDY

SOUTHERN CALIFORNIA SB 100

SCOPING WORKSHOP

October 29, 2019



# LA100 Inception

In June 2017 Los Angeles City Council directed LADWP:

- To develop a partnership with DOE renewable lab to conduct 100% Renewable Energy Study
- Establish stakeholder process

# LA100 Goals

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- To determine what **investments** should be made to achieve a 100 percent renewable energy portfolio for LADWP
- Examine potential for high quality **careers** and equitable local economic development
- Incorporation of **CalEnviro** screen into each research area
- Prioritization of **environmental justice neighborhoods** as the immediate beneficiaries of localized air quality improvement and GHG reduction
- Analysis by the **Ratepayer Advocate** on how the 100% renewable scenarios fit within the current rate structure

# LA100 Advisory Group

The 100% Renewable Advisory Group provides input and guidance throughout the study process. It is comprised of two individuals from each represented organization, one primary and one alternate member. The Advisory Group meets quarterly.



# LA100 Timeline



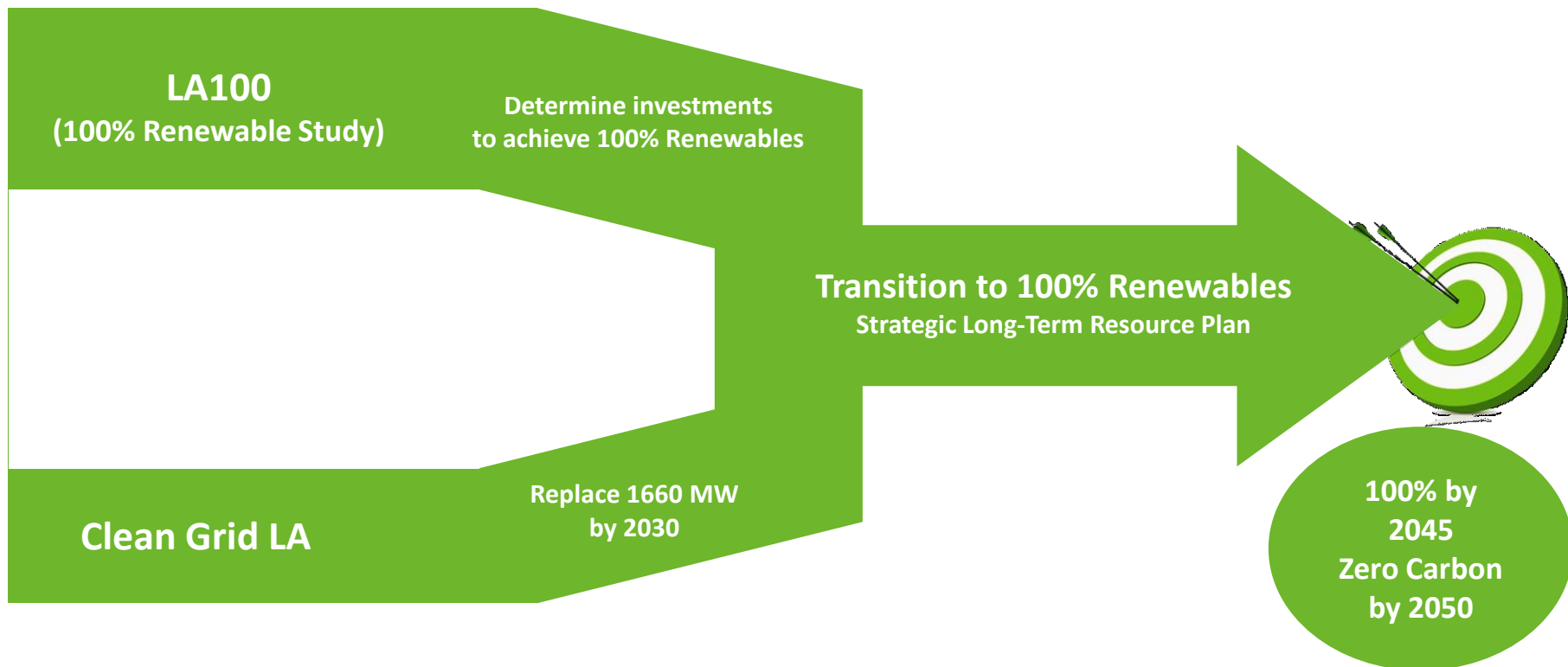
# Recent Events

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- |                           |  |
|---------------------------|--|
| <b>January 30, 2019</b>   | Suspended 2018 Strategic Long-Term Resource Plan (SLTRP) |
| <b>February 12, 2019</b>  | Mayor Eric Garcetti announced no OTC repowering          |
| <b>April 29, 2019</b>     | Mayor Eric Garcetti announced L.A.'s Green New Deal      |
| <b>September 19, 2019</b> | Held AG #9   |
| <b>September 24, 2019</b> | LA100 Study was amended                                  |



# Strategic Long-Term Resource Plan



## Power

Past & Present

Facts & Figures

Power Content Label

**Clean Energy Future**

100% Renewable Energy Study

Power Resource Plan

Power Reliability

Power Quality

Renewable Energy

Projects

Energy Efficiency & Rebates

Electric Safety

Smart Grid L.A.

Rates

### Clean Energy Future



#### Creating a Clean Energy Future

LADWP is creating a clean energy future for Los Angeles while maintaining a reliable and cost-effective power supply for customers. Our future energy supply has zero coal, expanded renewables, energy efficiency, and clean energy projects, and dramatically reduces fossil fuel emissions.

### Strategic Long-Term Resource Planning



L.A.'s energy future is guided by the Strategic Long-Term Resource Planning (SLTRP), a roadmap for providing reliable and sustainable electricity to our customers through 2050.

[Learn more about the Strategic Long-Term Resource Plan →](#)

### 100% Renewable Energy Study



At the request of the Mayor and City Council, LADWP has launched the 100% Renewable Energy Study and convened the 100% Renewable Energy Advisory Group to determine the steps and investments necessary to achieve a 100% renewable energy supply.

[Learn more about the 100% Renewable Energy Study →](#)



# 100% Transition & Reliability

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- The LADWP Balancing Authority Area is a large pocket of load with long transmission lines leading to it
- Existing transmission lines are not sufficient to import 100% of the required energy most of the year without in-basin generation
- Approximately 3200 MW of in-basin thermal generation is available to meet load and maintain reliability

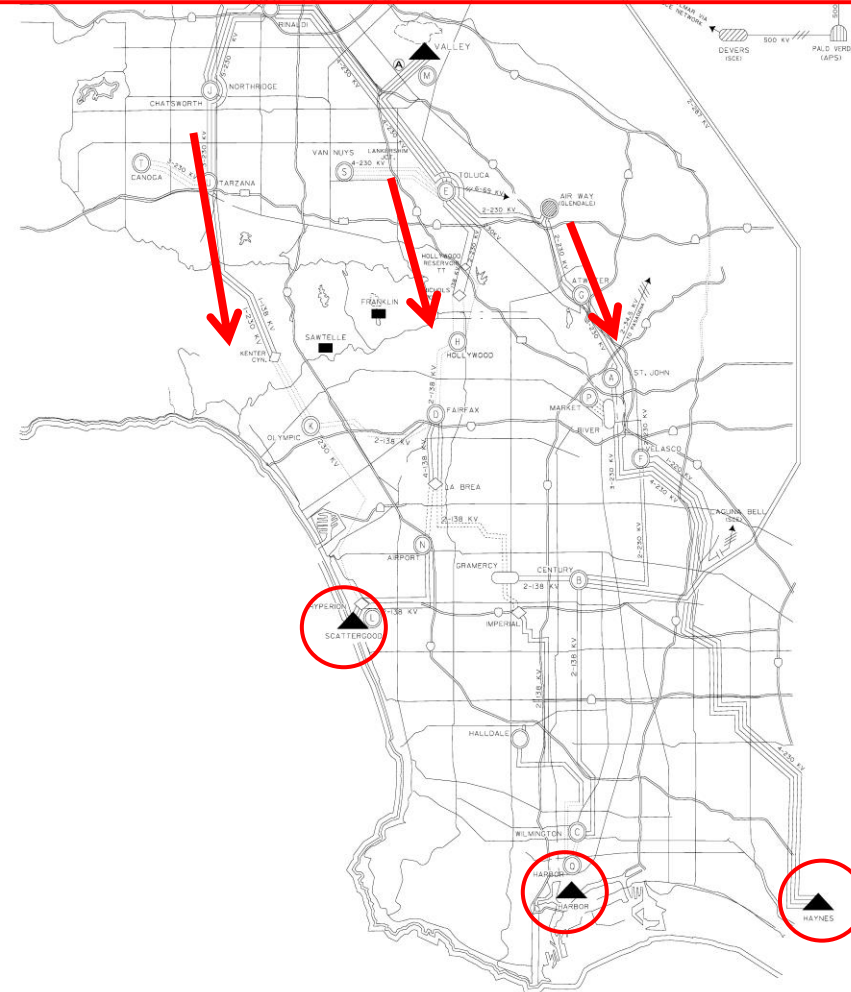
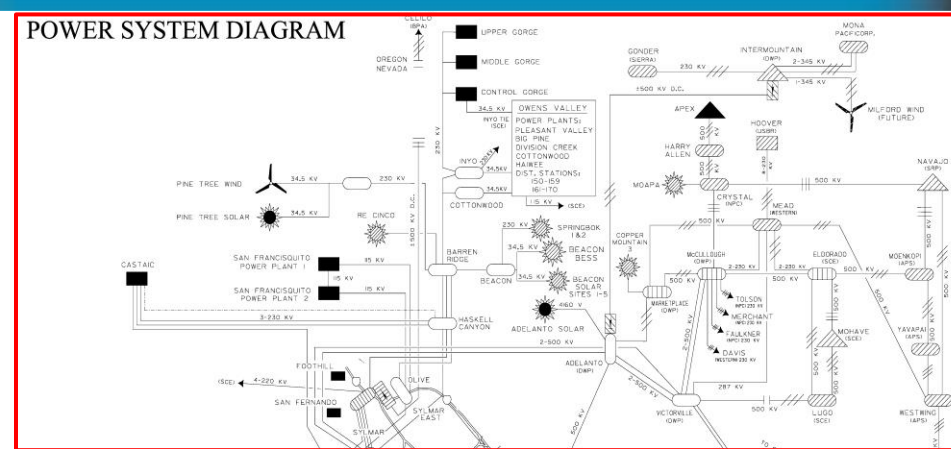
# 100% Transition & Reliability

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- Imports come into the northern part of the basin, generation is located in the south
- The generation in the south is there to keep in-basin transmission lines from overloading (this is how the system was designed)
- Whenever we add an additional external resource, we increase the imports and the need for in-basin transmission or generation resources

# Reliability

- More external transmission is needed to import external renewable resources
- More in-basin transmission and in-basin, dispatchable resources are needed as in-basin generation is retired



# Case Study: Saddle Ridge Fire

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- October 10, 2019
- Affected all three import paths into the LA basin
  - Pacific DC Intertie – complete loss
  - Victorville – LA – two of five lines
  - Barren Ridge – complete loss
- Import capability is 8350 MW (5939 MW for LA)
- October 11, 2019 peak load was 3331 MW

# Case Study: Saddle Ridge Fire

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- Import capability was reduced to 1650 MW (1442 MW for LA), a 4497 MW reduction for LA
- Adtl in-basin generation brought online – 951 MW
  - Peak in-basin generation was 2157 MW
  - An additional 515 MW for reserves
  - 135 MW of in-basin generation remained available
- 10-year October average 3611 MW, peak 5612 MW
- Sayre Fire, November 2008
  - 221 MW of load shed for 32 minutes
  - Impacted 115,000 customers



# SB 100 Comments

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- LADWP is a POU and BAA
  - Recognition of unique challenges
  - Flexibility in achieving SB 100
  - Equity and impact on rates
- Ensuring **reliability & resiliency**
  - Reliability Must Run (RMR)
  - Transmission
  - Continued investment in infrastructure
- Resource mix
  - Hydroelectric
  - Long duration storage
- Major contingencies



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