



Los Angeles  
Department of  
Water & Power

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CUSTOMERS FIRST

# LADWP EIM Implementation Regional Issues Forum

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# LADWP Overview

Balancing Authority

Largest Publicly Owned Utility

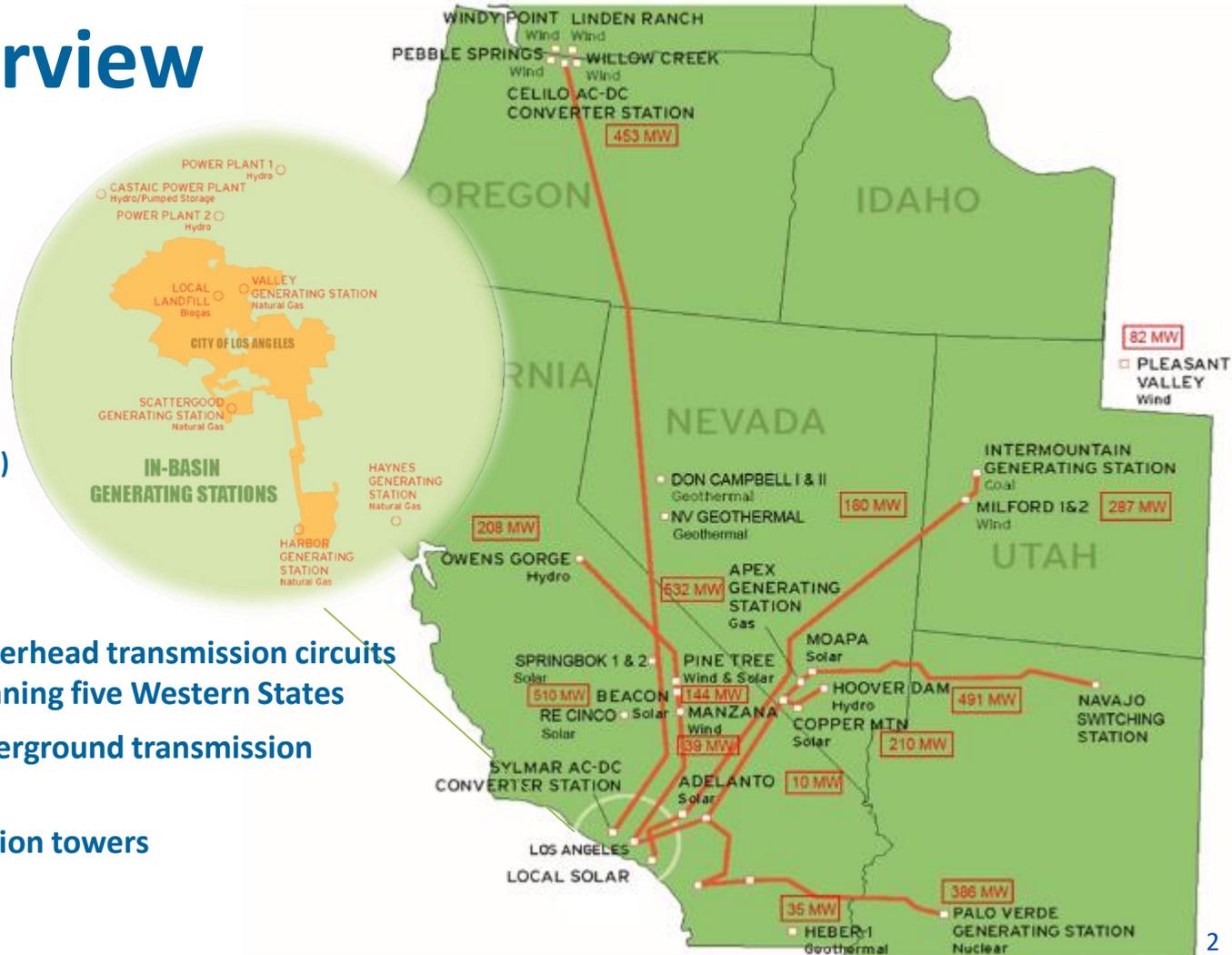
1.5 Million Electric Customers

\$4.7 Billion Annual Power Budget

Peak Demand of 6,502 MW (8/31/17)

## Transmission

- 3,507 miles of overhead transmission circuits (AC and DC) spanning five Western States
- 124 miles of underground transmission circuits
- 15,452 transmission towers



# Summer 2021 Resource Stack



**3,914 MW Nat Gas**



**1,924 MW Hydro**



**1,192 MW Coal**



**387 MW Nuclear**

**Total Capacity  
9,879 MW**



**974 MW Wind**



**1,132 MW Solar**



**20 MW Battery Storage**



**336 MW Geothermal**

# Project Implementation Organization

Senior AGMs, Power Systems – Reiko Kerr & Andy Kendall

Director, PEER – Paul Schultz

Project Manager, EIM – Jaime Pinedo

Power System  
SMEs

Power Planning, Development & Engineering  
Power External Energy Resources  
Energy Control & Grid Reliability  
Power Construction & Maintenance  
Power Supply Operations

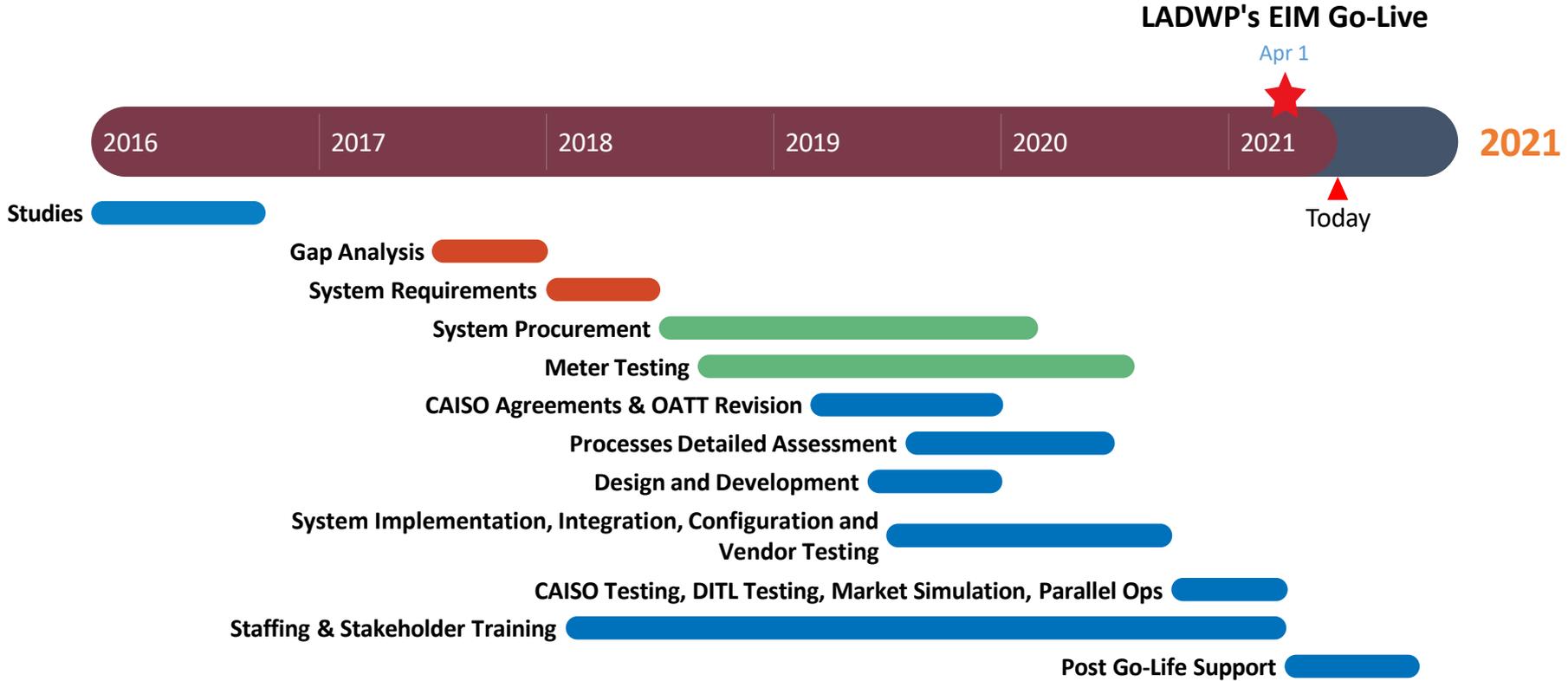
Power New Business & Technology Applications  
Power Regulatory Compliance & Specifications

Other Business  
Process Owners

City Attorney's Office  
OPA/RPA  
Environmental Affairs  
Financial Services  
Governmental Affairs  
Information Technology  
Cyber Security Services  
Supply Chain Services  
Power Administrative SRVS

- Plus consultants Worley teamed with Utilicast EIM system integration specialist

# Project Schedule



# Challenges

- Unique design / model complexity:
  - Sub-BA Concept
  - DC Lines
  - Generation lacking flexibility
  - High levels of renewables
- Staffing
- Metering
  - Some systems +100 years old
- COVID resource interruptions

# The Positives

- Excellent collaboration between CAISO and LADWP
- Computer Based Training creates a great introduction to EIM
- CAISO's ability to work through challenges on LA specific issues e.g. Castaic Constraints – decreased output as more unit come on
- CAISO's support in dealing with municipal utilities already in CAISO was extremely helpful to LADWP
- Smooth Go-Live on April 1, 2021 despite LADWP's complexities
- CAISO's post Go-Live support & Daily Market Performance Meetings and reports are extremely helpful

# Lessons Learned

## Systems & Data:

- CAISO environment stability materially impacted LADWP readiness
- Day-ahead Load forecasting needs more focus

## Training:

- Operator readiness is critical
- CAISO's Session 1 & 2 training should be brought forward by a couple of months
- Level 3 training / simulation needs improvement
  - Recognition CAISO is holding sessions to do deeper dive on topics

## Testing:

- ETSR coordination meetings were helpful, but additional documentation is needed to better coordinate testing and tasks
- Resource shortage and Covid-19 had a material impact
  - Compromised training and readiness
  - Inhibited knowledge transfer
  - Delayed testing

# Lessons Learned

## Documentation: Balancing Authority Area Operations Portal –(BAAOP)

- BAAOP Manual should be made available to onboarding Entities
- Master File documentation exists, however:
  - Need better Master File training
  - Business Practice Manual (BPM) needs more material for clarity
- Initiatives/fixes should be supported by detailed documentation:
  - Southern CA Public Power Authority (SCPPA) cities dynamic scheduling
  - DC Loss concurrent payback
  - Non-Conforming Load (NCL) forecasting
- Department of Market Monitoring (DMM) process
  - Better training and better documentation would be beneficial
- User Access Administrator (UAA) process
  - Documents should be available prior to on-boarding
- General:
  - CAISO Readiness criteria is not a true measure of Entity overall readiness





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Thank You

