Electricity Infrastructure Issues

LADWP

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Overview

Vertically-Integrated Utility
LADWP owns & operates its generation, transmission & distribution.

LA Basin: customer load center

LA Basin Generation
Four large thermal generating stations

Must import power from the western grid into the LA Basin.
Over the next 15 years, LADWP will replace over 70% of its power supply to become more sustainable and to comply with state environmental mandates.

Throughout this transformation, LADWP’s top priority is maintaining power system reliability to keep the power flowing to our customers, 24/7.
Transformation

Power Supply and Demand Transformation:
- Renewable Energy
- Coal Replacement
- Rebuilding Coastal Power Plants with flexible technology
- Renewable Integration
- Demand Response
- Energy Efficiency
- Distributed Generation

Transmission and Distribution Transformation:
- Upgrade Pacific DC Intertie to deliver renewable energy to DWP and CAISO from the Pacific Northwest (upgrade to improve reliability)
- Upgrade IPP DC to deliver renewable energy to DWP and CAISO from the Utah area
- Construct Barren Ridge Transmission Project to transport renewable resources from Tehachapi Mountains and Mojave Desert areas
- Participate in CTPG and WestConnect regional Planning
- Implement Local Voltage Support Program to reinforce system security
- Invest in Transmission & Distribution Reliability Program
- Smart Grid
Power Supply Transformation Elements

Achieve at Least 10% Energy Efficiency by 2020

Reach 33% Renewable Energy by 2020
- Interim Target: 25% by 2016
- Includes solar, wind, hydroelectric, geothermal, & biogas energy resources
- Includes expanded local solar program (Solar Incentive and new Feed-in Tariff programs)

Rebuild Coastal Power Plants to Eliminate Ocean Water Cooling & to Integrate Renewables
- Haynes, Scattergood & Harbor Generating Stations

Eliminate Coal from LADWP’s Power Supply
- Navajo Generating Station
- Intermountain Power Plant

Invest in Power Reliability Program
- Replace aging and inadequate infrastructure
Major Accomplishments

LADWP is making progress toward meeting goals & mandates, guided by long-term Integrated Resource Planning.

• Achieved 20% Renewables.
• Record investment in Energy Efficiency in 2012 (more than doubled budget).
• Eliminating Ocean Water Cooling at coastal power plants (Haynes 5 & 6).
• Record-level Solar Incentive Program participation. Approved installation of 100th MW of customer-installed rooftop solar in 2012.
• Approved 150 MW Feed-in Tariff Solar Program. First 100 MW starting Q1 2013. First system energized in June 2013.
• Approved largest municipal utility-scale solar developments in U.S. history; completed Adelanto and Pine Tree Solar Power Plant.
• Upgraded Interstate Transmission Lines to bring more renewables to LA.
• Reduced CO\(_2\) Emissions to 21% below 1990 levels.
LADWP must replace 9 generating units at 3 Coastal Power Plants. No unit can be taken off-line until its replacement is ready.
Coal Transition & Supply Integration

We are moving forward with eliminating coal from our energy mix. To maintain reliable energy supply without coal requires careful integration of all transformation elements.
Residential Monthly Bill - (500 kWh/Mo. Average Usage)

- Preferred Power Reliability Program
- Energy Efficiency
- 33% RPS
- Coal Replacement
- OTC Repowering
- Fuel
- Basic Power Reliability Program
- Other GT&D

Residential Customer Bill after Implementing 14% Energy Efficiency
Average Retail Rate Increase Contribution

2020/2032 / Avg (2012-2032)

- 0.9 / 1.0 / 0.8 cts, Preferred Power Reliability Program
- 2.4 / 2.6 / 1.8 cts, Energy Efficiency
- 1.7 / 1.9 / 1.6 cts, 33% RPS
- 0.4 / 1.8 / 0.7 cts, Coal Replacement
- 0.3 / 1.0 / 0.4 cts, OTC Repowering
- 1.0 / 2.5 / 1.4 cts, Fuel
- 1.0 / 2.9 / 1.3 cts, Basic Power Reliability Program
- 1.1 / 0.4 / 0.6 cts, Other GT&D

Cents/KWh

Questions and Discussion