



LADWP PINE TREE WIND POWER PROJECT

The LADWP Pine Tree Wind Power Project is the largest municipally owned wind farm in the U.S., producing 120 megawatts of clean, renewable wind energy. This amount of energy serves some 56,000 households in Los Angeles while reducing 200,000 tons of greenhouse gases—about the same as removing 35,000 cars from the road.

Pine Tree Facts:

- 80, 1.5 MW GE Wind Turbines sited on 8,000 acres of rugged terrain
- 120 MW total output
- 8.25 miles of new transmission to Barren Ridge Switching Station, connects Pine Tree wind power to high-voltage, north-south transmission into Los Angeles
- Provides 1.4 % of 20% Los Angeles' renewable energy goal; brings renewable power to nearly 13% of L.A.'s total power supply
- Displaces at least 200,000 tons of greenhouse gases, 8 tons of nitrogen oxide, and 11 tons per year of carbon monoxide (compared to a fossil fueled power plant)
- The amount of CO₂ displaced is roughly the same as removing 35,000 cars from the road or planting 1.4 million trees.
- The wind farm is operated 100% by LADWP Union shop electrical mechanics and station operators
- Pine Tree is located on partially leased land that remains a working cattle ranch
- Environmental mitigation includes re-seeding 310 acres with area native plants.



Construction:

The challenging work of building the Pine Tree Wind Project involves constructing 34 miles of roads, transporting large and heavy equipment to the turbine locations, constructing turbine foundations and erecting the turbines, laying 31 miles of underground cable to feed a collector station, and accomplishing these tasks during windy, wet weather months. The location of each wind turbine was verified by a wind expert to ensure they achieve maximum wind capacity.

Project Milestones:

LADWP issued Notice to Proceed	Oct. 1, 2007
Construction started on roads and lay-down area	Dec. 3, 2007
Groundbreaking Ceremony	Jan. 31, 2008
Project site grading	January 2008-October 2008
Transporting and erecting turbines	April 2008 – February 2009
Test phase and commissioning of turbines	October 2008 – May 2009
First turbine delivers energy to LA	Dec. 5, 2008
Commissioning of final turbine:	June 14, 2009

Fun Facts About Each Wind Energy 1.5 MW GE Turbine:

- Stands more than 213 feet tall to the top of the hub and 339 feet including the height of the blades (as tall as a 30-story building)
- Weighs about 200 tons
- Each turbine anchored into bedrock, 30-40 feet deep
- One blade is 123 feet long (sweeps the area of a football field)
- Rotor blades have diameter of 253 feet, and turn at 20 rpm at peak rotation
- Computerized wind sensors control each unit independently
- Powers more than 9,500 refrigerators per year
- Produces 2,000 horsepower, more power than 12 cars