# September 2018

# We Energies' generating system

COAL

# Elm Road Generating Station

Among the cleanest and most efficient coal-fueled power plants in the U.S.



The Oak Creek generating site is comprised of two power plants: Oak Creek Power Plant (OCPP) and Elm Road Generating Station (ERGS). *(See the OCPP fact sheet for information specific to that plant.)* 

### Location:

The Oak Creek generating site occupies 1,000 acres of land on the shore of Lake Michigan, 20 miles south of Milwaukee.

# Type of plant:

The ERGS units are supercritical coal-based, base-load (typically operating 24 hours a day).

# Number of active generating units:

2 steam turbines

### Years in service:

Unit 1: 2010 Unit 2: 2011

# **Generating capacity:**

Unit 1: 634 megawatts Unit 2: 634 megawatts

**Total net generating capacity:** 

1,268 megawatts

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# Elm Road Generating Station Units 1 and 2

## Fuel:

Pulverized coal; natural gas or propane for boiler start-up.

## Average coal use:

6,000-6,400 tons daily (depending on system demands)

# **Boilers**:

One per turbine generator.	
Height:	250 feet
Furnace temperature:	2,080 degrees Fahrenheit
Steam temperature:	1,050 degrees Fahrenheit
Steam pressure:	3,700 pounds per square inch

### Ash handling:

More than 99 percent of the fly ash is removed by a baghouse. Bottom ash is removed by a submerged conveyor.

# **Chimney:**

A single chimney serves both boilers. Height: 550 feet.

# **Cooling system:**

The Oak Creek generating site uses a combined cooling water intake system for ERGS and OCPP. Up to 1.56 million gallons (740,000 for ERGS and 820,000 for OCPP) of water from Lake Michigan are used every minute to convert the exhaust steam from the turbines back into water for reuse. The water is returned to the lake.

### **Control room:**

All major functions in the plant are controlled by operators with computer support to continuously monitor and report on pressures, temperatures, flow rates, etc. In addition, the computer aids in start-up, shutdown, load adjustments and information for future reference.