We Energies' generating system

April 2017

COAL

Presque Isle Power Plant

Presque Isle is the fifth largest power plant in We Energies' system.

Location:
This plant occupies 65 acres of land on the shore of Lake Superior in Marquette, Mich.

Type of plant:
Coal-based, base-load (typically operating 24 hours a day).

Initial cost:
$280 million

Units:
5 steam, 2 diesel generators for emergency auxiliary power.

Year in service:
Unit 5: 1974
Unit 6: 1975
Unit 7: 1978
Unit 8: 1978
Unit 9: 1979

(Units 1 and 2 were retired from operation on Jan. 1, 2007. Units 3 and 4 were retired on Oct. 1, 2009.)

Generating capacity:
Unit 5: 55 megawatts
Unit 6: 55 megawatts
Unit 7: 83 megawatts
Unit 8: 83 megawatts
Unit 9: 83 megawatts

Total net generating capacity:
359 megawatts

Presque Isle Power Plant

Fuel:
All units burn coal with a sulfur content of less than 1percent; #2 fuel oil for diesel generators and for boiler start-up.

Coal handling:

Transportation:	Self-unloading coal boats
Storage:	750,000-ton capacity pile; 1,200 to 1,600-ton capacity coal bunkers within plant
Preparation:	14 pulverizers of various manufacturers crush coal at 7 to 25 tons per hour, depending on unit/mills.

Average coal use:
1.2 million tons annually

Boilers:
One per turbine generator.

Height:	13 stories
Steam temperature:	1,000 degrees Fahrenheit
Steam pressure:	1,450 pounds per square inch

Ash handling:
99.5 percent of fly ash is removed by electrostatic precipitators or baghouses (fabric filters). Bottom ash is removed by a hydraulic removal system.

Chimney:
Two 400/410-foot chimneys for the plant.

Cooling system:
A maximum of 170,000 gallons of water from Lake Superior are used every minute to convert the exhaust steam from the turbine back into water for reuse. This cooling 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.