We Energies' generating system

September 2008

COAL

Presque Isle Power Plant

Presque Isle is the fourth 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:
7 steam, 2 diesel generators for emergency auxiliary power.

Year in Service:

Unit 3: 1964	Unit 7: 1978	
Unit 4: 1966	Unit 8: 1978	(Units 1 and 2 were retired from
Unit 5: 1974	Unit 9: 1979	operation on Jan. 1, 2007.)
Unit 6: 1975		

Generating Capacity:

Unit 3: 58 megawatts	Unit 7: 85 megawatts
Unit 4: 58 megawatts	Unit 8: 85 megawatts
Unit 5: 88 megawatts	Unit 9: 85 megawatts
Unit 6: 88 megawatts	

Total Net Generating Capacity:
547 megawatts

Presque Isle Power Plant

Contribution to Total System Electric Energy Production Capability:
9.4 percent

Voltage:

Generator:	13,800
Step-Up Transformer:	138,000

Fuel:
Units 3 through 6 burn low-sulfur bituminous coal; units 7, 8 and 9 burn a low-sulfur sub-bituminous coal; #2 fuel oil for diesel generators and for boiler start-up.

Coal Handling:

Transportation:	Self-unloading coal boats
Storage:	1 million-ton capacity pile; 375 to 1,600-ton capacity coal bunkers within plant
Preparation:	18 pulverizers of various manufacturers crush coal at 7 to 25 tons per hour, depending on unit/mills.

Average Coal Use:
2 million tons annually

Boilers:
One per turbine generator.

Height:	7 to 13 stories
Steam temperature:	900-1,000 degrees Fahrenheit
Steam pressure:	850-1,450 pounds per square inch

Ash Handling:
99.5 percent of fly ash is removed by electrostatic precipitators or baghouse (fabric filter). Bottom ash is removed by a hydraulic removal system.

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

Cooling System:
243,000 gallons of water from Lake Superior are used every minute to convert the exhaust steam from the turbine back into water for reuse. This water is returned to the lake.

Control Room:
There are three separate control rooms for operation (boilers, turbines and auxiliary equipment). Units 3 & 4 and 5 & 6 are operated in pairs with one control room and one control room operator for each pair. Two control room operators staff the third control room for Units 7-9.