



Meeting Our Future

The demand for electricity continues to grow as the Campbell Generating Complex moves toward 50 years of serving Michigan's families and businesses.

Today's high-tech world demands more and more electricity to power new industries, advanced computer networks and other technological wonders.

Consumers Energy is exploring a variety of options, including building new generating units, to meet its customers' growing demand for electricity.

Our goal is to provide the electricity you need not only today, but for years to come.



Consumers Energy

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J.H. Campbell Generating Complex

Touching Your Life

The J.H. Campbell Generating Complex touches your life every time you flip on a light switch, use a computer, watch television or do anything that requires the use of electricity.

The electricity that you depend upon comes from Campbell and the other Consumers Energy power plants. These power plants and the men and women who run them provide the electricity you need throughout your normal day, plus nights, weekends and holidays.

Electricity can't be stored, so it has to be generated the instant that you and Consumer Energy's 1.8 million other customers need it for your homes, schools and businesses.

It's not easy to provide that much electricity around the clock, yet the Campbell Complex and its 310 employees meet that challenge every day. And they do it in a big way: The Campbell complex can generate up to 1,440 megawatts, enough to power a city of a million people.

Powering Your Life

The Campbell Generating Complex has three separate coal-fired units. Unit 1 can generate up to 260 megawatts and Unit 2 can generate up to 360 megawatts. Unit 3 is Consumers Energy's largest coal-fired generating unit and can generate up to 820 megawatts.

Each year, the complex uses about 5 million tons of coal, which is delivered by rail.

To produce electricity, water is pumped through miles of steel tubes in a boiler. The burning coal inside the boiler turns the water to steam with a temperature of more than 1,000 degrees Fahrenheit and a pressure of more than 2,000 pounds per square inch.

That high-pressure steam is routed to the turbine for each unit. That steam turns the turbine blades and the shaft attached to the unit's generator. The generators turn at a constant 3,600 revolutions per minute, creating the electricity that goes through the electric transmission and distribution system to serve you and other customers.

Preserving Our Environment

Environmental stewardship is a basic responsibility for the employees of Campbell. Each day they do their part to preserve and enhance the environment.

The Campbell Generating Complex is certified by the Wildlife Habitat Council and has environmental enhancement programs or projects on 1,600 acres of the site's 2,000 acres. A key feature is the site's Biological Field Station, which hosts many school groups and activities designed to develop an appreciation for environmental stewardship and aquatic and terrestrial habitat studies.

More than 500 types of trees, plants, animals and fish thrive at Campbell. Many are found in the woods and vegetation on a 200-foot-high dune west of the generating units that has been included in the Nature Conservancy's "Michigan Natural Areas Registry."

Employees have installed nesting boxes for bluebirds and worked with Boy Scout troops to place wood duck nest boxes. The site also is one of Michigan's rare nesting sites for peregrine falcons.

Many of the trace amounts of chemicals found naturally in soil and plants also are found in coal and are released during combustion. These emissions are regulated by the U.S. Environmental Protection Agency and Michigan Department of Environmental Quality.

More than \$500 million has been spent to reduce emissions at Campbell's three units, and overall Consumers Energy has spent more than \$1 billion at its four coal-fired power plant sites to meet the latest environmental standards.

Those investments have resulted in substantial reductions in the emissions of sulfur dioxide, nitrogen oxides, mercury and other compounds since 1990. Through participation in the state of Michigan's Pollution Prevention Partnership and Clean Corporate Citizen programs, the Campbell Generating Complex meets the latest standards for regulatory compliance and environmental stewardship.

Right: The control room monitors the plant around the clock to ensure families and businesses get the electricity they need. **Below:** Conveyors move about 5 million tons of coal each year to produce electricity.



Right: Wildflowers grow undisturbed at the site's Biological Field Station.

