



# Celebrating a New Generation of Power for Michigan FACT SHEET

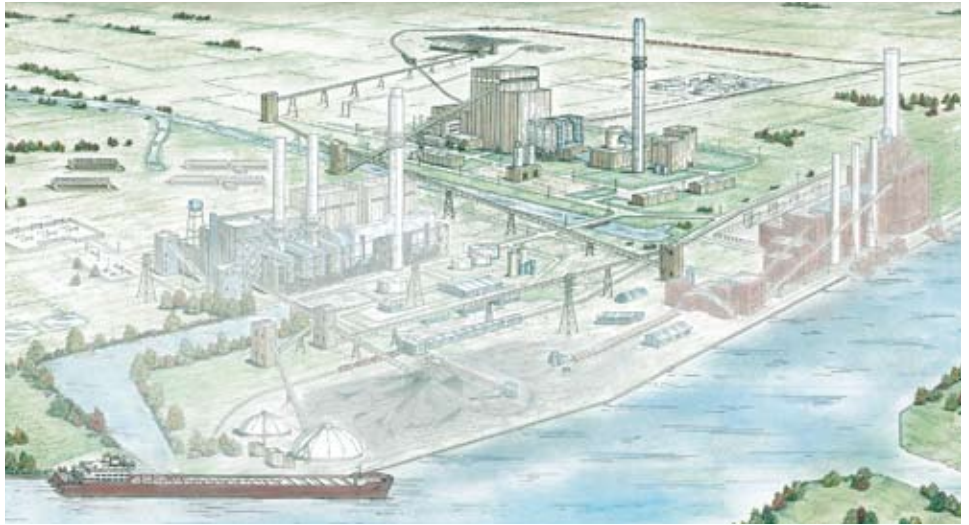
## THE PROPOSAL

CONSUMERS ENERGY PLANS TO expand its Karn/Weadock Generating Complex near Bay City, Mich., by building a new 800-megawatt (MW) advanced supercritical pulverized clean coal power plant — equipped with the latest technology to control emissions — and have it in operation in 2015.

Consumers Energy expects to use 500 MW of electricity from the plant to serve its customers. Other parties, which will be part owners of the new facility, will own 300 megawatts of the output.

The plant is expected to cost in excess of \$2 billion. Consumers Energy's share of that cost will be in proportion to its ownership interest in the new facility.

This proposed new facility will make a significant contribution to meeting Michigan's future needs for electric power, as outlined in Michigan's 21st Century Energy Plan and in the company's own Balanced Energy Initiative developed in response to the state's study.



## THE TECHNOLOGY

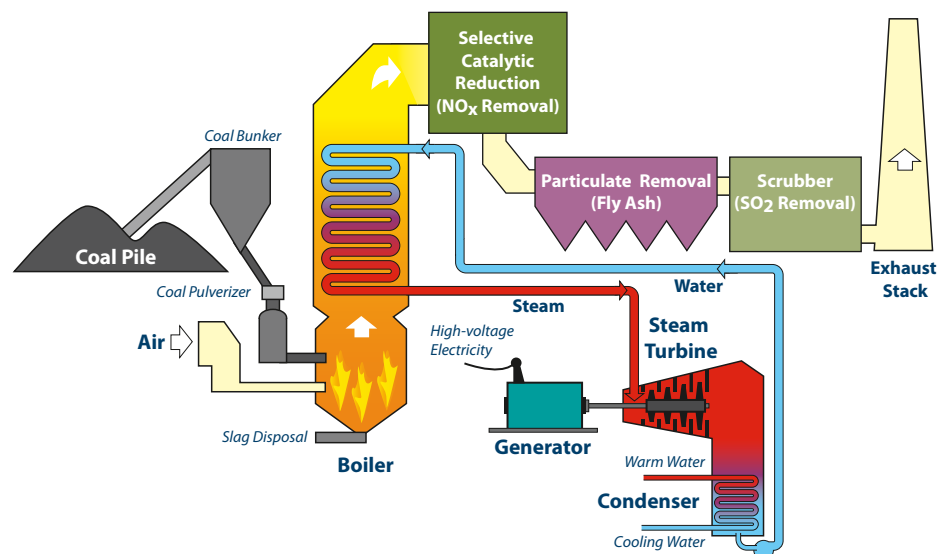
The proposed 800-MW advanced supercritical pulverized clean coal plant (SCPC) will use the latest and most advanced technology to improve operating efficiency and control emissions. Consumers Energy's decision to use SCPC technology is consistent with statewide energy needs modeling used in the 21st Century Energy Plan.

- Advanced SCPC technology is proven
- More than 400 SCPC plants are operating successfully worldwide, including 25 with the advanced SCPC technology Consumers Energy plans to use
- Most new coal plants planned or currently under construction in the United States use SCPC technology

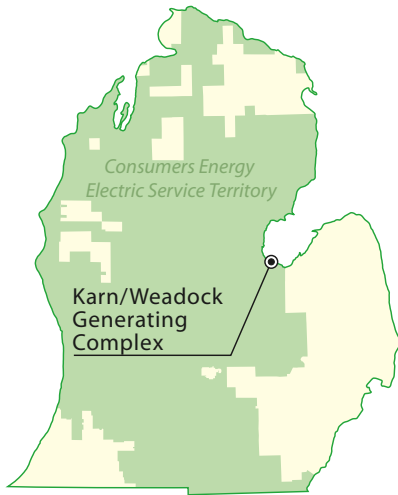
SCPC systems operate at higher temperatures and greater steam pressures than conventional systems. They require less coal per megawatt-hour, leading to lower emissions per megawatt (including carbon dioxide and mercury), and lower fuel costs per megawatt, leading to higher efficiency and lower fuel costs.

In short, SCPC provides the best overall balance in performance, reliability, lower emissions and cost for the company's customers.

*SCPC systems operate at higher temperatures and steam pressures requiring less coal, leading to higher efficiency, lower emissions, including CO<sub>2</sub> and mercury, and lower fuel costs.*



## THE SITE



CONSUMERS ENERGY INVESTIGATED MORE than 100 potential sites in Michigan for the location of the 800-MW plant. Critical factors in evaluating sites included access to rail, water and existing transmission assets. Consumers Energy's Karn/Weadock Generating Complex proved to be the best location due to:

- Multiple coal delivery options, including rail and water
- More efficient use of existing infrastructure and resources than a greenfield site
- Existing transmission access
- Proximity for serving customer load
- The 1,000-acre site offers room for expansion, including future carbon-capture technology as it becomes available
- Supportive local community

## NEED FOR POWER



*Despite Michigan's current economic condition, overall customer demand for electricity keeps growing.*

THE 21ST CENTURY ENERGY Plan recognized that customers in Michigan are using more electricity every year and that if action isn't taken soon, the state won't have enough power to meet its needs in a few years.

Overall customer demand for electricity keeps growing despite Michigan's current economic problems. The typical customer uses 8 percent more electricity today than 10 years ago due to increased usage of air conditioning and other electrical appliances.

Michigan's economy eventually will improve and it is prudent to build for tomorrow's economy not today's, particularly since it takes seven to eight years, from start to finish, to construct a new baseload power plant.

Consumers Energy's existing coal-fired baseload generating fleet — averaging 49 years of age — is the second-oldest in the country. A number of units are nearing the end of their useful life. While these aging plants have performed well and continue to be an important part of the company's diverse generating portfolio, the Balanced Energy Initiative calls for a regular evaluation of the underlying economics of these units.



*PA 141 will put Michigan at risk of running short of electricity in a few years and relying more heavily on buying power on the open market.*

## THE PLAN

DEVELOPED IN RESPONSE TO the 21st Century Energy Plan, released earlier this year by the state of Michigan, Consumers Energy's Balanced Energy Initiative provides a comprehensive framework to meet the energy needs of the company's 1.8 million electric customers for the next 20 years.

The plan calls for meeting the growing electric needs of customers through:

- Energy efficiency
- Demand management
- Expanding renewable energy
- Utilizing existing generating resources
- Developing new power plants

The 21st Century Energy Plan and the Balanced Energy Initiative also recognize that legislative and regulatory changes are needed so that new power plants needed to serve customers can be financed and built. Specifically, the state's electric deregulation law will need to be repealed or significantly reformed. Michigan needs an energy policy that will allow needed new power plants to be financed and built.

## WHY COAL?



*Coal is the most abundant natural resource in the U.S. with supply reserves exceeding 250 years.*

MICHIGAN'S ENERGY SECURITY AND RELIABILITY depend on a stable and diverse fuel supply — including hydro, natural gas, renewable and new advanced coal technologies — that offers the most reliable and competitively priced energy in today's market. For baseload generation, coal offers significant advantages:

- Coal is the most abundant natural resource in the United States. Supply reserves exceed 250 years — more than Saudi Arabia's oil reserves
- Because of coal's price advantage, Consumers Energy already uses this fuel to meet more than 50 percent of customer needs in Michigan

To balance competitive electricity costs with meeting evolving air emission regulations, Consumers Energy has employed a number of strategies. These strategies include transitioning to low-sulfur coal from the Powder River Basin and installing additional emissions-reduction equipment at the company's coal-fired plants.



*Studies show Michigan's air is the cleanest it has been in the modern era.*



*The new unit will use a closed-cycle cooling tower requiring minimal water use, enabling the company to further its conservation, recycling and fish protection goals.*

## ENVIRONMENT

CONSUMERS ENERGY IS WORKING hard to meet future environmental regulations while also bringing competitively priced electricity to customers to help drive Michigan's economic recovery.

- Studies show Michigan's air is the cleanest it has been in the modern era
- Consumers Energy will invest more than \$1.5 billion between 2000 and 2015 at its existing coal-fired plants to further control emissions
- Consumers Energy has reduced sulfur dioxide emissions by 79 percent and nitrogen oxides emissions by 67 percent at its coal-fired power plants from previous levels
- The company will continue its voluntary greenhouse gas management program to cost effectively reduce emissions
- In 2006, the Karn/Weadock Generating Complex received a Clean Corporate Citizen certification from the Michigan Department of Environmental Quality

The new clean coal plant will include the latest and best available emissions control technology. As an advanced supercritical power plant, it will run at higher temperatures and steam pressures. As a result, it will burn less coal to generate electricity while producing lower emissions, including CO<sub>2</sub> and mercury.

The new unit will use a closed-cycle cooling tower requiring minimal water use, enabling the company to further its conservation, recycling and fish protection goals.

## ECONOMIC IMPACT

THE NEW CLEAN COAL plant expansion will provide significant economic development benefits for Michigan and the region. The new plant represents an investment in excess of \$2 billion in the state's infrastructure.

- The expansion likely will create more than 1,800 jobs during peak construction and at least 80 permanent jobs when the plant is operational
- The Karn/Weadock Generating Complex currently employs 370 people

Consumers Energy commissioned a detailed economic impact study for this project. The new facility is expected to create millions of dollars in new tax revenue for the local area plus bring other positive economic impacts. The Karn/Weadock Generating Complex already pays about \$10 million per year in property taxes to local government. The proposed new plant is expected to more than double property tax revenues.

**Consumers Energy**

For more information:

[www.consumersenergy.com/newgeneration](http://www.consumersenergy.com/newgeneration)