

DTE's nuclear plan carries heavy cost

BY MARK FELLOWS

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DTE Energy in the next dozen years aims to do something no American utility has managed in a generation: bring a new nuclear plant online.

It's the only one planned today for Michigan, yet DTE will jostle with utilities around the country to meet federal tax credit eligibility — starting with an application deadline this year — and to mobilize a supplier base to a large extent now gone or located overseas.

The state's largest electric utility, with 2.2 million Detroit Edison customers in Southeast Michigan, DTE [NYSE: DTE] aims to submit its application to regulators in September, Chairman and CEO Anthony

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Earley said.

The projected cost of a new reactor approximates DTE's \$8.5 billion annual revenues. It's not a cost DTE likely can bear alone.



EARLEY

"We will probably have to look for partners in the plant," Earley said.

"These are going to be expensive plants up front, but once you get them built, they are very efficient and end up being some of the cheapest electricity you can use," said Earley.

DTE's Fermi 2 plant in Frenchtown Township, which hosted Republican presidential candidate Sen. John McCain on Aug. 5, is now DTE's cheapest plant to run, Earley said.

The stars are aligning to again build nuclear plants across the U.S., as Americans confront higher fuel and energy costs and the fears stoked by malfunctions at Three Mile Island, Chernobyl and even Fermi 1, fade.

The lack of greenhouse and other emissions from nuclear plants is positioning them now as the more environmentally friendly option. Michigan's coal plants produce about 70 million tons of carbon dioxide a year, or about 40 percent of the state's total, officials estimate.

Reactors in state

Companies and their operating commercial nuclear reactors in Michigan:

Indiana Michigan Power Co.

- Reactors: D.C. Cook 1 and 2
- Location: Bridgman
- Type: Pressurized Water Reactors
- Electrical Output: 1000 Mwe and 1060 Mwe

Detroit Edison Co.

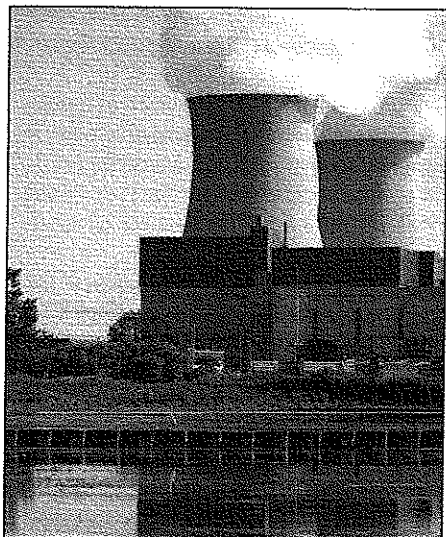
- Reactor: Fermi 2
- Location: Frenchtown Township
- Type: Boiling Water Reactor
- Electrical Output: 1089 Mwe

Nuclear Management Co.

(selling power to Consumers Energy)

- Reactor: Palisades
- Location: South Haven
- Type: Pressurized Water Reactor
- Electrical Output: 730 Mwe

Source: Nuclear Regulatory Commission



The Fermi 2 plant. | FILE PHOTO

Federal taxes on such emissions could add to costs of such power in the future, they fear, while no such costs are anticipated for nuclear generation.

The U.S. Nuclear Regulatory Commission expects to field nearly three-dozen applications for new reactors by 2010.

McCain said he wants to see 45 new nuclear plants by 2030.

State's power needs grow

Michigan producers generate about 105 million megawatt-hours of electricity each year. With peak electricity demand projected by the Michigan Public Service Commission to grow by 1.3 percent annually for the next two decades, new baseload generating capacity will be necessary by 2015. That's the assessment of former MPSC Chairman Peter Larks' 21st Century Electric Energy Plan submitted to the governor in 2007.

A mix of sources will be needed to fill Michigan's need, regulators and utility executives agree, but the state's second-largest electric utility has worked its way out of the nuclear business.

Consumers Energy, the electricity subsidiary of CMS Energy [NYSE: CMS] of Jackson, sold its Palisades nuclear plant near South Haven in 2007. It had abandoned plans for a mostly completed nuclear plant in Midland in 1984 because of construction site issues and post-Three Mile Island regulations, turning it into a gas-fired electrical and steam-generating plant. Consumers sold its interest in the Midland Cogeneration Venture in 2006.

It more recently completed decommissioning of its Big Rock nuclear plant near Charlevoix, paying the Palisades buyer, Entergy Corp., to take custody of spent fuel there. Executives concluded that one nuclear plant wasn't enough to sustain the work force and other resources for its operation, utility spokesman Jeff Holyfield said.

"We've said that down the road (nuclear) might be something we would look at," Holyfield said.

CMS last December purchased a gas-fired power plant in Zeeland, so for now, coal, natural gas and eventually wind will generate its power.

Consumers, with 1.8 million customers, now is laying plans to build a \$2 billion coal-fired plant at its Karn/Weadock Generating Complex near Bay City by 2015.

Both DTE and CMS identify Michigan's semi-regulated customer electrical choice market as an impediment to their plans. Michigan's PA 141 allows customers more latitude to choose their electric provider than many states, which utilities say makes their customer base unpredictable and, therefore, unattractive to lenders.

Both state legislative chambers passed bills limiting customer choice to no more than 10 percent of a utility's load, which Earley describes as adequate to take to lenders. The bills are now in conference committee.

Project would add jobs

DTE's proposed reactor would be housed in a new building on the Fermi site, 35

U.S. nuclear energy

- Licensed nuclear reactors operating in U.S.: 104
- Proportion of nation's electricity from nuclear: 20%
- New nuclear plants needed to maintain that proportion by 2030: 20 to 25

Source: Nuclear Energy Institute

miles south of Detroit. At 1,520 megawatts, the GE Hitachi Nuclear Energy Advanced Boiling Water Reactor is 30 percent larger than Fermi 2, Earley said.

Executives figure the project could create as many as 3,000 construction jobs lasting for the better part of a decade, and as many as 800 permanent engineering and other support positions.

That would mean a ripple effect of \$500 million annually, by one estimate.

Although nuclear waste still must be stored on site due to the nation's inability to so far bring the Nevada Yucca Mountain site into use, Earley likens that to an annoyance more than a roadblock.

"What's at stake here is an opportunity to really add a number of highly skilled, highly paid jobs to Michigan at a time they are desperately needed, while we are strengthening our infrastructure," he said.

It won't be the last generating plant DTE invests in, given the aging generation infrastructure providing power in Michigan.

"I think we are looking at a building cycle that will last for a number of decades," Earley said.

The average age of a Michigan power plant now is close to 50 years, state regulators said, while the design lifespan of such plants tends to be around 65 years.

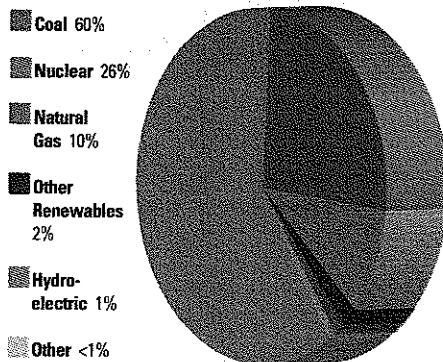
"If we don't do this, other states are going to be building power plants," Earley said, siphoning energy dollars and jobs from Michigan.

That could add another daunting obstacle to the state's efforts to retool its economy.

"Unless you have reliable and affordable electric supply," Earley said, "any state's going to have trouble attracting businesses."

State's electricity

Electricity generating source share in Michigan, 2006:



Note: Figures are rounded.
Source: U.S. Department of Energy

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