

UW/MGE Power Plant

West Campus Cogeneration Facility (WCCF)

In December 2000, the UW/MGE plant was proposed as a 90 megawatt facility that wouldn't cost taxpayers any money to build.(1) It was originally sold as so efficient and economical that it would cost less than burning coal, which would save the state money and reduce Madison air pollution. (2)

(1) <http://www.news.wisc.edu/view.html?get=5613>

(2) <http://www.news.wisc.edu/view.html?get=5637>

But now, the proposed MGE facility is a 150 megawatt electrical generating plant. The state pays \$90 million for construction and then continues to pay MGE for steam and electricity. The 150 MW plant has less steam capacity for the UW than the earlier 90 MW design but at rip-off prices. (1,2)

(1) <http://www.madison.com/archives/read.php?ref=tct:2003:04:23:265093:EDITORIAL>

(2) see attached e-mail from DOA engineer to Representative Spencer Black

Two different consultants to the DOA, Sebesta-Blomberg in 2003,(1) and Burns & McDonnell in 2000,(2) found the state would save money with its own 45 MW plant instead of partnering with MGE or other third-party ownership structures. Sebesta's April 28 report indicated the state would save \$212 million over 30 years with its own plant instead of partnering with MGE. Sebesta's 45 MW would provide the same amount of steam and chilled water for the UW as MGE's 150 MW electrical plant.

(1) Sebesta-Blomberg, April 28, 2003 - http://www.doa.state.wi.us/docs_view2.asp?docid=965

(2) Burns & Mcdonnell, February 2000, pages 44-46 - http://www.mge.com/images/PDF/cogen_app/d_SteamChilledWaterStudy.pdf

A provision inserted in the January 2002 state budget instructed the UW/state to negotiate with a local utility (MGE) to build a 150 megawatt power plant on the UW campus. This was after MGE funneled \$170,000 to hidden Democratic political campaign groups controlled by Senator Chuck Chvala.

UW and DOA staff questioned why the DOA was entering into agreements with MGE without looking at lower cost alternatives. In January 2003, Representative Spencer Black suggested a complete and independent reevaluation of the energy needs of the UW campus which would result in the creation of a new proposal which would specifically address the energy needs of the UW.*

* <http://www.madison.com/archives/read.php?ref=tct:2003:02:05:198343:EDITORIAL>

But the UW and the Doyle administration refused to consider alternatives and instead ignored and even tried to discredit their own consultant's analysis. Working with UW, MGE and DOA, Sebesta provided a number of reports from late 2000 to April 28, 2003. These reports consistently showed large cost savings for the state if it owned its own plant instead of paying MGE. The April 28 report indicated the MGE 150 MW plant would cost the state \$212 million more than a UW owned 45 MW plant. After seeing the bad news for the MGE plant again, the UW and MGE made Sebesta immediately revise the evaluation using new fuel cost escalators that Sebesta said were unreasonable.(1,2,3,4) This major revision occurred while the DOA heating plant engineer overseeing the project was on vacation.

UW and MGE had ample opportunity to use different assumptions in earlier versions, but chose to change these important parameters only after the last public hearing.

(1) "Revised Report Called Bogus"- <http://www.madison.com/archives/read.php?ref=tct:2003:05:07:266644:BUSINESS>

(2) Sebesta to DOA May 5 transmittal letter- http://www.doa.state.wi.us/docs_view2.asp?docid=979

(3) Sebesta May 6 revised report- http://www.doa.state.wi.us/docs_view2.asp?docid=981

(4) Sebesta May 6 Supplementary Narrative and Review- http://www.doa.state.wi.us/docs_view2.asp?docid=980

The UW and DOA have also ignored how other universities have saved money with their own cogeneration plants. UW engineering staff provided data showing a number of cogeneration plants that have been built for even less than Sebesta's estimate. Sebesta's cost estimate for the cogeneration part of a UW owned 45 MW facility (not including the chiller plant) is \$85 million or \$1885/kw.(1)

Recently constructed facilities at other campuses have been built for \$1100/kw or less.

The University of Illinois built a 57 megawatt cogeneration plant for \$57 million.(2)

- (1) Sebesta February 18 report, pages 3,4 - http://www.doa.state.wi.us/docs_view2.asp?docid=888
(2) UW/MGE/DOA April 1 responses to questions from public, pages 17-19.
<http://www.fpm.wisc.edu/fpm/cogen/FORE4-1-03/ReponsestoFOREQuestionsSubmitted4-1-03.pdf>

MGE, UW and Alliant have tried to discredit Sebesta's cost estimates as too low or unreliable. But UW's data of other campus cogeneration plants (1 above) shows that, if anything, Sebesta was conservative in estimating final installed cost.

MGE plan is shortsighted for UW

The last new UW heating plant was built in 1974 on Walnut Steet at the west end of campus. This plant is only about 1/4 the size of the proposed MGE plant but has more steam capacity and nearly the same chilled water capacity for the UW as the MGE 150.

Located next to the Walnut plant, the MGE facility will be huge. The PSC's draft EIS for the MGE plant says "The WCCF would be much taller than current uses of the site. The new building would be large, creating a new dominant feature in any view that includes the existing West Campus plant, the WARF building (14 stories), and the USDA Forest Products Lab, which are the tallest features in the area."* It won't be a nice looking building but a 100 foot high power plant with steel panel sides, cooling towers, and walls of metal louvers.

* page 180, <http://psc.wi.gov/electric/cases/uwcogen/document/deis.pdf>

While the MGE plant will use up an entire 4.5 acre site, it will run out of steam capacity for the UW in 8-10 years.(1) The UW will then have to build another heating plant. The MGE 150 megawatt plant also uses up all the remaining air pollution budget for particulate pollution.(2) Future additions to the UW heating plant or local industrial developments may be impossible with the MGE plant.

(1) page 12, MGE PSC application

http://www.mge.com/images/PDF/cogen_CPCN061202.pdf

(2) <http://www.madison.com/archives/read.php?ref=tct:2003:04:11:263887:FRONT>

In contrast, a UW owned plant would be significantly smaller and allow for UW heating plant expansion on the site.* A UW owned plant would consume less of the air pollution headroom and provide more flexibility for future development.

* page 3, http://www.doa.state.wi.us/docs_view2.asp?docid=901

The MGE electrical generating plant will draw up to 3 million gallons per day from Lake Mendota. The proposed solution is a complicated, never used or tested, engineering design involving infiltration fields around Madison and an abandoned well.* A UW owned cogeneration plant would require far less water and no mitigation.

* <http://www.madison.com/archives/read.php?ref=wsj:2003:05:06:266498:BUSINESS>

High Priced Steam

According to UW data calculated for the Sebesta April 28 report, the cost of steam from the MGE plant would be significantly higher than from a UW owned plant. The attached document indicates the cost for steam and chilled water just to Program Supported Revenue customers could be \$560,000 more per year for the MGE 150MW plant compared to a UW 45MW plant. These higher costs would also apply to the main UW campus but to an even greater extent. The UW dorms for example, would pay \$200,000 more per year with the MGE plant than with a UW owned plant. The MGE plant would unnecessarily add to the dorm fees paid by Wisconsin students and their parents.

Utility charges to the dorms, the hospitals, US Forest Products Laboratory, and the student unions all come from citizens. Why should they pay more for MGE's benefit?

Reliability

The UW wants much higher electrical reliability for the UW campus than the rest of Wisconsin. According to UW-Madison Chancellor John Wiley, "It's very difficult to overstate the importance of having access to electricity, at any cost." *

* <http://www.madison.com/archives/read.php?ref=tct:2002:12:07:55991:FRONT>

UW-Madison already has over 80 backup generators with more than 15 megawatts of capacity.*

* pages 23-26, <http://www.fpm.wisc.edu/fpm/cogen/FORE4-1-03/ReponsestoFOREQuestionsSubmitted4-1-03.pdf>

The UW shouldn't demand gold-plated reliability during this fiscal crisis.

Transmission lines

The UW and MGE have claimed that building the MGE plant will reduce the need to build new transmission lines in and around Madison.

But a comparison of two American Transmission Company 10 year assessment reports (on ATC's website), shows no difference in ATC's transmission line plans when the MGE plant is added to the grid. The controversial 345 KV line from Rockdale to West Middleton stayed in the plan for 2009 even after the MGE 150 plant was included in the flow model. Adding the MGE plant doesn't reduce the number of new lines or upgrades in ATC's plan.

- 2002 Ten Year Transmission System Assessment dated July 2002 -doesn't include the MGE 150 MW

- 2002 Ten Year Trans. Assessment Update dated February 2003 - includes MGE 150 MW in flow model

UW & DOA ignore professional staff

UW and DOA engineers know it can be done much cheaper than by paying \$90 million for part of a plant and then still having to pay MGE for electricity and steam. A December 7, 2002 article illustrated the concerns of professional engineers and staff.*

* <http://www.madison.com/archives/read.php?ref=tct:2002:12:07:55991:FRONT>

*(Among the critics is Ken Ragland, emeritus professor of mechanical engineering at UW-Madison. Ragland has pored over documents related to the proposal and has concluded the deal is sweet for MGE and its shareholders -- but not necessarily for everyone else.

"This plant is five times too large for the campus needs," he said. "The UW should not be expected to solve future electrical needs of Dane County and southern Wisconsin."

Ragland isn't alone in raising red flags.

Gary Guitzkow, superintendent of UW's Charter Street heating plant, has pressed the issue and wonders why the state would partner with a private company on such a major investment. The initial cost of the plant would be split roughly 50-50, with MGE operating it for at least the first three years.

"With huge deficits looming on the horizon, why would the current administration put this on the fast track and enter into any agreements with MGE without looking into some of the lower cost alternatives that are available?" he said.)