

# **MGE Community Environmental Advisory Group (CEAG) Meeting Minutes August 29, 2007**

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## **CEAG Members Present:**

Rich Bogovich	Lindsey Lee
John Coleman	Mike Ricciardi
Lynn Hobbie	Steve Schultz
John Imes	Eileen Vandoros

## **CEAG Members Absent:**

Pete Goepfert  
Judy Olson  
Jo Oyama-Miller  
Marsha Rummel

## **MGE Resource Employees Present:**

Greg Bollom	Angela James
Jeanne Burns-Frank	Scott Neitzel
Laura Coleman	Sonjia Short
Kristine Euclide	

## **Others Present:**

Kim McCutcheon (Wisconsin Department of Natural Resources)  
Jane Rossing (Note Taker)  
John Shenot (Wisconsin Department of Natural Resources)

## **Agenda Item 1 - Welcome, Call to Order, Review Today's Agenda, Review Previous Meeting Minutes (Lynn Hobbie)**

At 7:35 a.m., Lynn Hobbie called the meeting to order. She welcomed and thanked everyone for coming.

Lynn reviewed today's agenda and minutes from the March 20, 2007, meeting. The minutes were approved as written.

# MGE Community Environmental Advisory Group (CEAG) Meeting Minutes August 29, 2007

---

## **Agenda Item 2 - Blount Generating Station Cogeneration Study (Greg Bollom and Scott Neitzel)**

MGE's Vice President - Energy Supply, Scott Neitzel, introduced himself to the CEAG. He noted the Blount Generating Station (BGS) Cogeneration Study was the last item of the Environmental Cooperative Agreement (ECA) to be completed. Scott gave an overview of the draft report distributed at the meeting.

### **BGS Cogeneration Study Overview:**

#### *Background and Context*

- Most data used for the study were generated during the Energy 2015 process. The conversion of BGS to a cogeneration facility and six other alternatives were considered in the study and discussed in the report.
- This year, the State of Wisconsin, Dane County, City of Madison, and MGE are conducting a study to assess the Capitol Heating and Charter Street plants. The study will provide more information on how these plants use steam and how costs can be balanced between MGE's electric customers and the State's steam customers. Cogeneration would allow steam costs to be covered by the State and electric costs to be covered by MGE's electric customers. Specific planning and load information is not yet available from the State.
- MGE is conducting a global study to assess its generation future with options such as cogeneration.

#### *Draft Report Highlights*

- BGS will become a gas-fired peaking plant for capacity purposes after the burning of coal has been discontinued. BGS will have limited runs for electric purposes due to the expense of fuel and short run times.
- At a cogeneration plant, steam loads can be similar to electrical loads. The steam needs for Capitol Heating or an expanded steam utility area are more consistent with a high intermediate if not a pure base load plant.
- The regional electric market complicates cogeneration and makes it more expensive for customers than other alternatives. While in a cogeneration mode producing electricity and steam, both products may not be economical at the same time; therefore, when one product is needed, costs may not be fully recovered for the second product.

# MGE Community Environmental Advisory Group (CEAG) Meeting Minutes

## August 29, 2007

---

- All these variables contribute to the overall economics of cogeneration. From the perspective of MGE's customers, it is ultimately MGE's responsibility to provide them with the most reasonable price. At this point, cogeneration has approximately a \$10 million price tag\* for MGE's electric system which is too much to overcome in the current economic and regulatory environment.

\*The table on page 6 of the report is a cost comparison of seven scenarios with and without uneconomic electric costs. After coal is discontinued, there is one set of costs for delivering steam to Capitol Heating and one for BGS burning natural gas. In all scenarios, there is consistently a \$10 million difference to subsidize the cost of providing steam to electric customers.

### ***Correction***

- A typo was noted on page 2, paragraph 2, line 6. The period should be removed between the words "functionality" and "when." The sentence beginning on Line 4 should read as follows: "Both approaches are described below and both came to similar conclusions: using BGS, as a co-generation plant to simultaneously satisfy MGE' needs and the State, County, and City's needs, given BGS's current size and functionality when viewed from the perspective of MGE's customers, co-generation using BGS is economically feasible in only very narrow, special circumstances."

### **Questions and Comments Regarding the BGS Cogeneration Study Overview:**

- CEAG members noted that after coal burning is discontinued at BGS, it seems unreasonable to have a large environmental footprint and reduced staff in order to be in operation for a few days of the year for peak load. CEAG members also suggested that the BGS facility may disappear completely since the facility is located on prime real estate.

MGE responded that it is required to have excess capacity (18 percent reserve margin). Having assets that do not run all the time is an industry-wide phenomenon.

MGE also noted that currently, BGS is an intermediate load plant running 30 percent. When the conversion to natural gas takes place, the load will drop to 10 percent or less. BGS will still operate at certain times of the year especially in late winter and spring due to power plants coming off-line for maintenance. Capacity factor is determined by how much energy is produced when online.

## MGE Community Environmental Advisory Group (CEAG) Meeting Minutes August 29, 2007

---

- CEAG members asked if extra capacity could be handled by transmission lines.

MGE responded that the location of generation on the system makes a difference. If BGS is not generating electricity, it provides system support that would have to be provided in some other way. Since BGS is very important to the system, removing it would require one or two transmission upgrades.

- CEAG members asked MGE to comment on the physical footprint of other utility plants.

MGE responded that the city block that BGS occupies is a minimum space by industry standards. From a planning perspective, sites are difficult to come by. MGE would not forego BGS lightly.

The State's study is considering a plant that provides steam to the State and others. The footprint will depend on the fuel type used.

- John Shenot asked MGE to clarify the options and costs for cogeneration at BGS to produce all the steam currently produced at Capitol Heating.

MGE responded that the scenario it modeled assumed BGS supplied steam to replace all the steam currently produced at Capitol Heating. The scenario included only costs incurred by MGE. The State would likely need to make additional capital expenditures at Capitol Heating to replace its current equipment to accommodate the receipt of its entire steam requirements from BGS. These capital costs to the State are unknown, and therefore, were not considered part of MGE's scenario.

- John Shenot noted he assumed MGE's analysis factors into the State's cost the expense of buying steam and asked if there would be a cost savings to the State.

MGE responded that the expense of buying steam would be included in the cost to the State. MGE did not make an estimate of the cost of MGE's steam to the State.

MGE noted it is difficult to estimate the precise cost savings to the State as these will be determined by the State's decision to burn coal, natural gas, or biofuel. Once the State makes a decision, MGE can determine if the steam will be an ancillary or base product and also compare when steam and electricity are marginal and balance the economics to benefit both. (When selling electricity and steam, steam would be the secondary product except in winter or spring when steam is needed and electricity would be the marginal product.)

## MGE Community Environmental Advisory Group (CEAG) Meeting Minutes August 29, 2007

---

- CEAG members noted they do not foresee the State continuing with coal.

MGE responded that the State is facing many of the same factors that led MGE to the decision about BGS. MGE wants to help the State, but MGE's customers cannot subsidize the cost of steam production for the State.

- CEAG members noted the cost differential is based on the cost of purchasing electricity vs. generating electricity with a gas-fired plant when generating steam. CEAG members asked if options include generating with coal and why the cost differential is \$10 million.

MGE responded that the study compared all other options (natural gas, biomass, solar, wind, etc.) and, on average, cogeneration would cost \$10 million. The only technology not reviewed was nuclear.

MGE noted as load forecasts grow and units have to be retired over time, there is a mismatch between available generation and demand from customers to add generation at the next least cost alternative. In the short term, MGE will have purchased 10 megawatts (MW) of power. Going forward, a power plant will need to be built. The State needs Capitol Heating for steam which forces BGS to run for steam production and changes the generator dispatch which is a net cost of \$10 million. Having to supply steam to the State forces MGE to use BGS when there is a better economic choice.

- CEAG members asked if the future cost of installing transmission capabilities to the customer is included in the study.

MGE responded that it is not included in the study nor is it part of the transmission proposal being filed today.

- CEAG members asked if it is valid to make a comparison between generating steam and transmission capabilities and other costs not included in the study.

MGE responded that there are a number of reasons why future transmission capability is not included in the study. First, this study is a generation planning model. Second, the transmission system is built for a number of reasons. When looking at relative costs of transmission upgrades for long-term generation, transmission costs are not that great.

## MGE Community Environmental Advisory Group (CEAG) Meeting Minutes August 29, 2007

---

- CEAG members noted other input is needed from the State as this study is not particularly informative.

MGE responded that the study was informative from its perspective. It provided an understanding of the economics MGE has to overcome for its customers in order to make this work with the State.

- CEAG members noted the footprint of Capitol Heating vs. BGS is small. Because these plants need to modernize, cogeneration almost seems prohibitive. CEAG members also noted that East Washington Avenue is open for redevelopment of tall buildings (20 to 40 commercial and residential) to create a district.

MGE responded that the State and MGE are in this study together; however, the State needs to make a baseline decision. The study makes assumptions beyond the State's current load.

- CEAG members asked what the State's time line is for the study.

MGE responded that the State has not committed to a time line and an ending time frame has not been identified. The draft plan will be available for public comment this fall. At this point, the scope is broad. The State received \$250,000 in funding for a feasibility assessment, and they seem to be committed to do this study.

- CEAG members noted MGE may not be taking the lead to promote and create a vision for cogeneration in Madison. CEAG members hoped MGE would be excited about cogeneration in order to promote it but may be constricted by the State.

MGE responded that its vision for this area is not to burn coal. MGE needs a potential partner to make the same commitment in order to have exciting possibilities. This is the first step in the vision. MGE is open to options not to burn coal if the State is open to other possibilities.

- CEAG members asked what MGE's positive vision is for the future for alternative energy.

MGE responded that it will add 76 MW of wind this year which is up from 11 MW. This is part of the Energy 2015 vision. Decisions take a long time to make and implement. Comparing its record to other utilities, MGE is proud of its accomplishments including the CEAG.

## MGE Community Environmental Advisory Group (CEAG) Meeting Minutes August 29, 2007

---

- CEAG members asked what MGE's positive vision is for the future for transitioning BGS to a gas-fired peaking plant.

MGE responded that this initiative will be implemented over time in order to benefit the community and prevent harming MGE's customers. The planning of the West Campus Cogeneration Facility (WCCF) took five years to identify and shape the opportunity as well as to get commitments from all partners in order to move forward.

According to the study, there may be some potential for cogeneration at BGS, but it will come with a cost. The cost would need to be borne by others, not MGE ratepayers. MGE does not think coal is a viable option for cogeneration at BGS; however, it is not MGE's position to influence the State on what decision to make. MGE laid the foundation in order for the State to make a decision.

- CEAG members inquired about which options and ideas to promote as individuals who support the great vision for the BGS area.

MGE responded that once the State makes the decision not to burn coal, MGE can move forward with other decisions. What will be taken off the table for better or worse is a fundamental decision and will allow for a vision for the BGS area. Technology can be solved once the fuel source and costs are determined. The feasibility study will include looking at some of these options. The additional cost of \$10 million will have to be justified by the steam utility as a whole.

John Shenot noted the cost to the community and county would be much more than \$10 million per year if national air quality standards can't be met. Cogeneration would keep MGE in attainment standards forever and reduce air pollution in Madison.

- CEAG members inquired if MGE would be interested in being a partner for a viable project, working with a broader consensus, if the cogeneration concept is not closed.

MGE responded it is a possibility as long as customers were not to pay a disproportionate share. MGE noted this is one reason why it is involved in the feasibility study.

- CEAG members asked how cogeneration fits into the carbon credit scenario that might develop.

MGE responded that fuel choice would influence extra incentives. This is being discussed on the Governor's Task Force and on a national level.

# MGE Community Environmental Advisory Group (CEAG) Meeting Minutes

## August 29, 2007

---

- John Shenot asked if there would be space available at BGS for new cogeneration units as older units will be retired.

MGE responded that there would be space within the wall since it will be retiring coal and older units. Biomass fuel would require storage that may not be within the wall but possibly in the next yard down.

- CEAG members asked MGE to compare the footprint of BGS vs. WCCF.

MGE responded that the footprint of WCCF is less than BGS since the building is smaller and it was built quite tight.

Lynn Hobbie encouraged CEAG members to take a copy of the BGS Cogeneration Study with them. Lynn noted that questions and comments should be directed to Mike Ricciardi within the next two weeks.

### **Agenda Item 3 - Summary of 2002 Through 2007 Environmental Cooperative Agreement Accomplishments (Lynn Hobbie)**

Lynn Hobbie distributed copies of the Environmental Cooperative Agreement: Major Accomplishments, 2002-2007 report and presented some highlights. The report will be posted on MGE's Web site.

#### Overview of Accomplishments:

- Received ISO 2001 certification in October 2004. BGS recently received a three-year ISO 14001 recertification.
- Increased the use of alternative fuels and burned more paper-derived fuel which allowed MGE to displace 43,000 tons of coal.
- Implemented the use of 20 percent biodiesel fuel in its diesel vehicles (a 100-vehicle fleet).
- Improved boiler combustion efficiency at BGS and experienced NO<sub>x</sub> reductions.
- Established a Voluntary Emission Reduction Registry for companies to acknowledge emission reductions that go beyond compliance.
- Partnered with Earth Tech, U.S. Geological Survey, U.S. Forest Products Research Lab, and the Wisconsin Department of Natural Resources (WDNR) to install a stormwater filtration demonstration system.
- Reused 30,000 tons of fly ash and 38 tons of bottom ash.
- Completed a diesel generator emission reduction study with a fleet of diesel generators that supply reliability throughout the system.
- Removed 230 pounds of mercury from equipment and recycled 1.66 pounds of mercury in the last three years with the mercury thermostat recycling and removal program.

# **MGE Community Environmental Advisory Group (CEAG) Meeting Minutes**

## **August 29, 2007**

---

- Looked at thermal discharge options and found the most effective way to reduce discharge is to discontinue burning coal at BGS. The Thermal Discharge Utilization and Reduction Study is part of MGE's Energy 2015 Plan.
- Made major equipment improvements at BGS such as quieter bells, a new coal conveyor system, and shuttle wagon.
- Formed the CEAG which has been extremely valuable in developing new ideas and providing feedback.

### **Agenda Item 4 - Status of the Environmental Cooperative Agreement (ECA)** **(Kristine Euclide)**

Kristine Euclide stated the five-year term of the ECA expires on September 26, 2007. MGE made the decision to extend the Agreement for an additional five years without which a number of things would be discontinued including the CEAG. The process to extend the Agreement requires meeting with and getting the approval of the Joint Finance Committee of the State Legislature. The Agreement must then be signed by WDNR Secretary Scott Hassett and MGE's Chief Executive Officer Gary Wolter. The extension will be signed and in place within one week. CEAG will continue under the new ECA. Some amendments will be made to the ECA regarding items to accomplish over the next five years.

John Shenot noted the process to extend the Agreement for another five years is different than initially entering into an Agreement as it is more of a public process. New ideas, directions, and areas of emphasis are welcomed from CEAG members. Comments regarding the change in structure or purpose of the CEAG would also be appreciated.

### **Questions and Comments Regarding the Status of the ECA:**

- CEAG members noted the CEAG previously identified a variety of work products including the cogeneration study. CEAG members assume there will be meetings solely for the purpose of identifying goals and work products for the extended Agreement.

MGE responded that there will be an opportunity to discuss goals that will be developed for the next five years. This opportunity will probably begin at the next CEAG meeting.

- John Shenot noted all the commitments of the original Agreement have been met. There will continue to be ongoing and periodic reports, but the extended Agreement is an opportunity for MGE and the CEAG to explore new areas of emphasis.

MGE thanked the CEAG for all its time and effort devoted to the original drafting and implementation of the ECA over the past five years. As noted in the ECA accomplishments report, there is a lot to be proud of.

# **MGE Community Environmental Advisory Group (CEAG) Meeting Minutes August 29, 2007**

---

- John Shenot requested an electronic version of the ECA accomplishments report. He would like to encourage other Wisconsin companies participating in this pilot program to do five-year ECA reports as MGE did.

## **Agenda Item 5 - Items to Share**

Lynn Hobbie thanked the CEAG for all the time given to MGE over the last five years.

The meeting was adjourned at 9:10 a.m.

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