



OBERLIN MUNICIPAL LIGHT AND POWER SYSTEM ♦ 289 SOUTH PROFESSOR STREET ♦ OBERLIN, OHIO 44074


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MEMORANDUM

To: Gary Boyle, Interim City Manager

Re: New Base Load Generation Facility - American Municipal Power Generating Station

From: Steve Dupee, Director 

Date: February 6, 2007

Over the last four (4) years, we have participated in the development of a new base-load generation facility to serve our community's future power supply needs. This development process has resulted in the proposed American Municipal Power Generating Station (AMPGS), an approximately 1,000 megawatt power plant that will use state of the art, proven, clean-coal technology to minimize emissions and ensure high operating efficiencies. The AMPGS will be an extremely important component of our municipal electric system's efforts to control future power supply costs. This facility will be owned and operated by AMP-Ohio and will replace the Richard H. Gorsuch Generating Station, AMP-Ohio's current flagship coal-fired generation facility located in Marietta, Ohio.

In the next few months, City Council will be asked to consider executing a power supply sales contract with AMP-Ohio to commit to an output share of the AMPGS. The purpose of this memorandum is to reacquaint City Council, council appointees and members of the Public Utilities Commission with the development of this project as well as provide an update on current activities and a brief project schedule.

Feasibility Study Development

At the AMP-Ohio Annual Conference in October of 2002, AMP-Ohio formally unveiled its strategic plan, a comprehensive effort focusing on AMP-Ohio's core purpose and values. A major part of that plan was the development of a 20 year power supply needs analysis. The analysis revealed that beginning in 2007, AMP-Ohio members would have a definitive need for additional base-load generation resources of at least 500 megawatts. This conclusion was determined using a load growth factor of 1% and assumed "AMP-Ohio Member-owned" base-load generation as well as the Richard H. Gorsuch Station Generating Station would remain in operation. The analysis also revealed that using an 80% minimum load factor for a base-load generation resource, there was a definitive need for an additional 250 megawatts of generation beginning in 2009, bringing the total generation need to 750 megawatts.

Based on the analysis results, obtaining a new base-load generation resource that would be online between 2007 - 2012 would be a critical factor in AMP-Ohio's future success in maintaining low-cost, stable electric power for its members and their respective communities. As such, the AMP-Ohio Board of Trustees approved a solicitation of Request for Proposals (RFP) for a consultant to perform a feasibility study to evaluate the development of a base-load generation facility with modern pollution control technology. The study would address the following tasks:

- Technological Analysis and Cost Estimates
- Study of Regional Location/Transmission Access
- Fuel Availability Study
- Schematic Design
- Site Selection
- Permitting and Easements
- Power Siting Board Applications

AMP-Ohio estimated that the cost of this study would be approximately \$3,000,000. AMP-Ohio proposed that the study be paid for through a developmental phase subscription process based upon the cost of the study, the capacity size of the proposed base-load generation facility and the number of kilowatts to be taken by each member. Ultimately, a not to exceed cost of \$5.00 per kilowatt was developed. On February 18, 2003, City Council passed Ordinance No. 03-09 AC CMS authorizing our participation in the developmental phase feasibility study. Our share of the costs for the study was based upon a recommendation that our power portfolio should contain base load resources equaling 55% of our projected peak in 2009. Therefore, our ordinance authorized a participation level of 6,650 kilowatts x \$5.00 for a total cost of \$33,250.

In May of 2003, AMP-Ohio signed a contract with Sargent & Lundy LLC, a Chicago-based engineering consultant, to perform the feasibility study. Seventy-six (76) AMP-Ohio member communities took local action to participate in the study. In 2004, AMP-Ohio formed a partnership with Virginia-based Blue Ridge Power Agency (BRPA) and Michigan South Central Power Agency (MSCPA) as study participants, and potential recipients of the plant's output. Combined, all three organizations represent 92 public power systems with approximately 600,000 customers and the potential for 960 megawatts of base load generation capacity requirements.

Request of Interest - Comparative Analysis

In parallel with the feasibility study, in February, 2004, AMP-Ohio issued a Request of Interest (ROI) for power supply solicitation for 750 to 1000 megawatts of base load generation for a minimum of 20 years. Information collected through the ROI process would be evaluated and compared to the feasibility study being performed by Sargent & Lundy. The purpose of this ROI process was to provide the basis for a comparative analysis of AMP-Ohio constructing, owning and operating its own power plant (self-build option) vs. other power supply options such as purchasing long term power supply, purchasing a stake in an existing power plant, participating in the development of a newly proposed power plant, etc.. In June, 2004, AMP-Ohio hired Black and Veatch, an engineering consulting firm, to evaluate information supplied through the ROIs. In August, 2005, AMP-Ohio unveiled the results of the ROI process. In conclusion, the ROI process did not successfully identify any long-term firm power supply proposals. The investor-owned utilities or developers did not propose any partnering arrangements that successfully made it through the ROI process. Market forecasts for power supply costs for the period of 2012 to 2025 were higher than preliminary estimates for AMP-Ohio to own and operate its own base load generating facility. The outcome of the Black and Veatch report was that the AMP-Ohio self-build option was the best fit to meet the base-load needs of the organization's members.

Generation Technology

One of the first tasks undertaken in the feasibility study was to determine the optimal base-load generation technology. Sargent & Lundy and AMP-Ohio staff performed an extensive review of generation technologies including: pulverized coal, integrated gasification combined cycle, circulating fluidized bed, wood-fired, natural gas combined cycle and waste fuel. As a critical step in the process, AMP-Ohio performed due diligence to ascertain the viability of each of these generation technology options. Critical considerations included: need to control long term power supply, facility size, total cost, reliability, availability,

environmental considerations, operational considerations as well as siting access to water, fuel transportation options and transmission interconnection. Based on these considerations, the Sargent and Lundy analysis resulted in a recommendation to build two (2) 500 megawatt(nominal) pulverized coal units as the preferred generation technology and configuration for the AMPGS facility.

Site Selection

After an extensive review of more than 30 sites in 6 states, in October of 2005, AMP-Ohio announced the preferred site for the AMPGS to be located in southern Meigs County near Letart Falls, Ohio. The site was selected on several criteria including size, location, water access, raw material access and transmission access. Local reaction has been positive since the site was officially identified as the preferred site for the new facility. Land options to purchase have been executed for 98% of the site. It is important to note that the decision to locate the facility in Meigs County is contingent upon successful permitting, completion of detailed engineering/economic studies and contractual considerations.

Permits

In January of 2006, AMP-Ohio filed an initial application for transmission interconnection with PJM. This action started the process of obtaining physical connection to the transmission grid. In May of 2006, AMP-Ohio filed an air permit-to-install (PTI) application with the Ohio Environmental Protection Agency. AMP-Ohio is currently working on additional critical permits, including: National Pollutant Discharge Elimination System (NPDES), Ohio Power Siting Board (OPSB), U.S. Army Corp. of Engineers and Residual Solid Waste Landfill Permits. These permits are scheduled to be filed in the coming months.

Emission Technology

The AMPGS facility will employ a comprehensive air pollution control system to reduce air emissions to levels consistent with the Clean Air Act's Best Available Control Technology (BACT) standard, an emission limitation based on the required degree of reduction for each regulated air pollutant emitted from a new stationary source. Emission reductions will be achieved through a combination of control technology, boiler design, fuel selection and effective combustion practices. Once on-line, this will be one of the cleanest facilities of its type in the nation. In November, 2006, AMP-Ohio declared their intent to pursue Powerspan Air Emissions Control Technology. This multi-pollutant control technology, called Electro-Catalytic Oxidation (ECO), achieves outlet emissions at or below those of best available technologies and produces a valuable fertilizer co-product. In addition, the ECO system will be designed with features that allow for future expansion to make the generating station "CO2 capture ready," based on the results of a pilot program that AMP-Ohio is participating in with Powerspan and First Energy at their Burger Plant in Shadyside, Ohio.

Gorsuch Station

The flagship base-load generation facility for AMP-Ohio has been the Richard H. Gorsuch Station in Marietta, Ohio. The Gorsuch Station is a 213 megawatt coal-fired power plant and currently provides 6.6 megawatts of generating capacity to the City and generates approximately 48% of our electricity requirements. The Gorsuch Station has been the workhorse for our community and many other AMP-Ohio members since the mid-1980's when AMP-Ohio acquired it. It is one of many reasons why our community has enjoyed low-cost, reliable power for so many years. However, this aging coal-fired station is a 1950's vintage plant utilizing old and outdated technology. The plant will simply be unable to meet future emission regulations without significant capital investments. Recognizing that the Gorsuch Station would likely not continue to operate beyond the start-up of the AMPGS, in May of 2006, AMP-Ohio issued a Statement of Interest (SOI) document to seek interest from third parties to redevelop or re-power the Gorsuch Station using innovative or environmentally-friendly technology. If so, AMP-Ohio members could potentially have the option of taking power supply from a re-powered or redeveloped project.

RW Beck Study Long Term Power Supply Study

In September, 2006, AMP-Ohio hired R.W. Beck Consultants to perform a 20 year power supply plan for each AMP-Ohio member. The purpose of the plan is to provide each member with a long term optimal power supply portfolio to minimize expected power supply costs over the 20 year planning period. The optimal portfolio will include possible participation in various base-load, intermediate and peaking power resources as well as market purchases. This study will also assist each member by providing information on how the AMPGS facility fits within our optimal power supply portfolio. The study is expected to be completed by the end of February, 2007.

Once we have had an opportunity to review the study results, I will be better prepared to provide you our recommended output share of the AMPGS facility.

AMPGS Project Schedule

- Permitting Process (2006-2008)
- Member Authorization for final commitment (August, 2007)
- Hire Engineer/Procurement/Construction (EPC) Contractor (2008)
- Construction Activities (2009 - 2013)
- First generating unit on-line in 2012, second unit on-line 2013

In March, we will be receiving a draft ordinance and power sales contract for the AMPGS project for our review and comment. As I show on the project schedule, it is anticipated that final authorization to participate in this project will be necessary by the end of August. I will have more to report in the coming months as we approach the date for final commitment. Presentations from AMP-Ohio staff to PUC and City Council will also be forthcoming.

I am available at your convenience to discuss.

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cc: Members of City Council
Council Appointees
Members of the Public Utilities Commission