

BEFORE

THE OHIO POWER SITING BOARD

In the Matter of the Application of)	
American Municipal Power-Ohio, Inc., for a)	
Certificate of Environmental Compatibility)	Case No. 06-1358-EL-BGN
and Public Need for an Electric Generation)	
Station and Related Facilities in Meigs)	
County, Ohio.)	

OPINION, ORDER AND CERIFICATE

The Ohio Power Siting Board coming now to consider the above-entitled matter; having appointed administrative law judges to conduct the hearings; having reviewed the exhibits introduced into evidence in this matter; and being otherwise fully advised, hereby issues its Opinion, Order and Certificate in this case as required by Section 4906.10, Revised Code.

APPEARANCES:

Chester Wilcox & Saxbe LLP, by John W. Bentine, Stephen C. Fitch, April R. Bott, Nathaniel S. Orosz, and Matthew S. White, 65 East State Street, Suite 1000, Columbus, Ohio, 43215-4213, on of behalf American Municipal Power-Ohio, Inc.

Marc Dann, Attorney General of the State of Ohio, by Duane W. Luckey, Chief, Public Utilities Section, by William L. Wright and John H. Jones, Assistant Attorneys General, 180 East Broad Street, Columbus, Ohio 43215 and by Margaret A. Malone and Christina E. Grasseschi, Assistant Attorneys General, 30 East Broad Street, 25th Floor, Columbus, Ohio 43215, on behalf of the staff of the Ohio Power Siting Board.

Shannon Fisk, Aaron Colangelo, and Anjali Jaiswal, 101 North Wacker Drive, Suite 609, Chicago, Illinois 60606, on behalf of the Natural Resources Defense Council.

Trent Dougherty, 1207 Grandview Avenue, Suite 201, Columbus, Ohio 43212, on behalf of the Ohio Environmental Council.

Sanjay Narayan, 85 Second Street, Second Floor, San Francisco, California 94105, on behalf of the Sierra Club.

Elisa Young, 48360 Carmel Road, Racine, Ohio 45771, *pro se*.

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OPINION:I. Summary of the Proceedings:

All proceedings before the Board are conducted according to the provisions of Chapter 4906, Revised Code, and Chapter 4906, Ohio Administrative Code (O.A.C.).

American Municipal Power-Ohio, Inc., (AMP-Ohio or Applicant) is a nonprofit municipal power system organized in 1971. AMP-Ohio was formed to own and operate electric facilities in order to provide generation, transmission, and distribution of electric power to its members. AMP-Ohio currently provides wholesale power and services to 121 member municipal electric systems in five states including 81 in Ohio (Staff Ex. 1 at 2).

Prior to formally submitting its applications, AMP-Ohio consulted with the Board Staff (Staff) and representatives of the Board, including the Ohio Environmental Protection Agency (Ohio EPA) regarding application procedures. AMP-Ohio held a public informational meeting regarding the proposed electric generating facility on December 5, 2006, in Meigs County, Ohio.

On May 4, 2007, AMP-Ohio filed its application for a certificate of environmental compatibility and public need to construct a 960 megawatt (MW) electric generation facility (American Municipal Power Generating Station or AMPGS), consisting of two 480 MW electric generating units in Meigs County, Ohio.

On June 11, 2007, and June 19, 2007, AMP-Ohio filed supplemental information to the certificate applications. The Board accepted the applications on June 29, 2007, as being in compliance with Chapter 4906 of the Revised Code. By entry dated August 2, 2007, the administrative law judge scheduled the local public hearing in this matter for November 1, 2007, and the adjudicatory hearing for November 8, 2007.

On July 20, 2007, AMP-Ohio filed proof of service of the accepted, complete application with local officials and libraries in accordance with Rule 4906-5-08, O.A.C. On September 19, 2007, AMP-Ohio filed proof of publication in the local newspapers of the initial public notices required by Rules 4906-5-08(B) and 4906-5-09, O.A.C. Further, AMP-Ohio filed proof of publication of the second newspaper notices regarding the application on October 24, 2007, as required by Rule 4906-5-08, O.A.C. Finally, on January 3, 2008, AMP-Ohio filed copies of letters describing the AMPGS to each property owner within the planned site and to each property owner who may be approached by AMP-Ohio for any additional easements necessary for the construction, operation, or maintenance of the AMPGS, as well as copies of the letters providing notice to each local official entitled to service of the application.

On October 16, 2007, the Staff of the Ohio Power Siting Board filed its Staff Report of Investigation (Staff Report) regarding the application (Tr. at Staff Ex. 1).

On October 25, 2007, the National Resources Defense Council, Ohio Environmental Council, and Sierra Club (Citizen Groups) filed a motion to intervene in this proceeding. Moreover, on October 29, 2007, Elisa Young filed a petition to intervene in this proceeding. Intervention was granted to both the Citizen Groups and Ms. Young on December 4, 2007. Further, on October 25, 2007, motions for admission *pro hac vice* were filed on behalf of Shannon Fisk and Sanjay Narayan; and, on November 29, 2007, motions for admission *pro hac vice* were filed on behalf of Aaron Colangelo and Anjali Jaiswal. These motions also were granted by the administrative law judge on December 4, 2007.

The local public hearing was held on November 1, 2007, at Meigs High School, 42091 Pomeroy Pike, Pomeroy, Ohio. At the public hearing, 22 members of the public testified. The testimony by the public was roughly equally divided between witnesses supporting the proposed AMPGS project because of its impact upon the local economy and witnesses opposed to the project because of concerns related to the environment.

The adjudicatory hearing commenced on November 8, 2007, at the offices of the Public Utilities Commission of Ohio, 180 East Broad Street, Columbus, Ohio. The hearing continued on December 11, 2007, December 12, 2007, December 17, 2007 through December 19, 2007, and January 4, 2008. At the conclusion of the hearing, post-hearing briefs, and reply brief were filed by AMP-Ohio, the Citizen Groups, and Staff.

II. Certificate Criteria:

Pursuant to Section 4906.10(A), Revised Code, the Board shall not grant a certificate for the construction, operation, and maintenance of a major utility facility, either as proposed or as modified by the Board, unless it finds and determines all of the following:

- (1) The basis of the need for the facility if the facility is an electric transmission line or gas or natural gas transmission line;
- (2) The nature of the probable environmental impact;
- (3) The facility represents the minimum adverse environmental impact, considering the state of available technology and the nature and economics of the various alternatives, and other pertinent considerations;
- (4) In the case of an electric transmission line, such facility is consistent with regional plans for expansion of the electric

power grid of the electric systems serving this state and interconnected utility systems; and that such facilities will serve the interests of electric system economy and reliability;

- (5) The facility will comply with Chapters 3704, 3734, and 6111, Revised Code, and all rules and standards adopted under those chapters and under Sections 1501.33, 1501.34, and 4561.32, Revised Code;
- (6) The facility will serve the public interest, convenience, and necessity;
- (7) The impact of the facility on the viability as agricultural land of any land in an existing agricultural district established under Chapter 929, Revised Code, that is located within the site and alternate site of the proposed major facility; and
- (8) The facility incorporates maximum feasible water conservation practices as determined by the Board, considering available technology and the nature and economics of various alternatives.

III. Summary of the Evidence:

A. Basis of Need (Section 4906.10(A)(1), Revised Code)

AMP-Ohio argues that, under Ohio law, it is clear that it does not have to demonstrate need for AMPGS. However, AMP-Ohio states that its certificate application clearly articulates a need for AMPGS. Further, AMP-Ohio claims that all of its witnesses testified as to the need for the AMPGS (AMP-Ohio Ex. 3 at 2, Exhibit SK-3). AMP-Ohio argues that two factors summarize the need for the AMPGS. First, AMP-Ohio's members currently are overly dependent on volatile power markets. Second, forecasts for future power needs demonstrate that the power supply needs for the region and for AMP-Ohio's members will continue to increase.

In the Staff Report, the Staff recommends that the Board find that Section 4906.10(A)(1) is not applicable to this electric generating facility project (Staff Ex. 1 at 18). The Citizen Groups did not contest this recommendation in their briefs.

The Board notes that Section 4906.10(A)(1), Revised Code, requires that the Board determine the basis of the need for a proposed facility if the facility is an electric

transmission line or a natural gas transmission line. The proposed AMPGS is a generation facility rather than an electric transmission line or natural gas transmission line. Accordingly, the Board finds that it is unnecessary to determine the basis of the need for the AMPGS.

B. Nature of Probable Environmental Impact and Minimum Adverse Environmental Impact (Sections 4906.10(A)(2) and (3), Revised Code).

In this proceeding, the Citizen Groups have raised issues regarding the environmental impact of the carbon dioxide (CO₂) emissions which may result from the operation of the proposed AMPGS facility. As these are new and novel issues for the Board to consider, we will address these issues prior to addressing the broader environmental impacts of the proposed AMPGS project.

1. Environmental Impact Related to CO₂ Emissions.

AMP-Ohio contends that it has identified all probable environmental impacts from the proposed AMPGS project, as required by Section 4906.10(A)(2), Revised Code. AMP-Ohio further claims that it specifically considered the environmental impacts of CO₂ emissions from the AMPGS facility (Tr. II at 116-117).

AMP-Ohio argues that it has demonstrated that the proposed AMPGS facility represents the minimum adverse environmental impact as required by Section 4906.10(A)(3), Revised Code. AMP-Ohio claims that other base load options do not result in less adverse environmental impact, considering the state of available technology and the nature and economics of the various alternatives. AMP-Ohio contends that it considered a significant number of conservation and renewable generation options, including wind, hydro, biomass, and energy efficiency; however, AMP-Ohio claims that, while it considers these generation options critical pieces in its power supply portfolio, it is clear that utilization of such resources, even combined, cannot feasibly and cost-effectively replace AMPGS to serve its growing needs for base load generation (AMP-Ohio Ex. 3 at 5).

Moreover, AMP-Ohio claims that it considered four different options for base load generation for the AMPGS: pulverized coal (PC), circulating fluidized bed (CFB), natural gas combined cycle (NGCC), and integrated combined cycle gasification (IGCC) but that, after considering numerous criteria, AMP-Ohio determined that a PC plant was the best choice to meet AMP-Ohio's needs (AMP-Ohio Ex. 3 at 7). AMP-Ohio argues that the evidence in the record demonstrates that the proposed AMPGS represents the minimum adverse environmental impact, considering the state of available technology and the nature and economics of the various options (AMP-Ohio Ex. 1 at 9; AMP-Ohio Ex. 2 at 9; AMP-Ohio Ex. 3 at 9).

AMP-Ohio specifically addresses its consideration of IGCC as an alternative to PC. AMP-Ohio contends that although it considered IGCC as a potential base load option, IGCC was eliminated for a number of reasons. Citing the testimony of its witness Couppis, AMP-Ohio states that risk, cost, size, reliability and environmental and operating considerations all supported the selection of PC rather than IGCC (AMP-Ohio Ex. 1 at 4-5). AMP-Ohio notes that, according to their analysis, IGCC is not as dispatchable as PC (AMP-Ohio Ex. 1 at 4). According to AMP-Ohio, dispatchability is critical to AMP-Ohio because the AMPGS will provide a large part of their base load resources (Tr. II at 57).

In contrast, AMP-Ohio argues that the evidence presented at the hearing did *not* demonstrate that the selection of IGCC for the proposed AMPGS project would represent the minimum adverse environmental impact, considering the state of available technology and the nature and economics of the various alternatives and other pertinent considerations. AMP-Ohio claims that the testimony of the Citizen Groups' witness Furman and AMP-Ohio's witness Meyer did not demonstrate that operating IGCC plants can achieve air emissions at a greater level than state-of-the-art PC plants such as the proposed AMPGS facility (Tr. I at 109-112; AMP-Ohio Ex. 2 at 5-6; Tr. II at 122-123).

Moreover, AMP-Ohio states that it is proposing to use Powerspan technology for sulfur dioxide (SO₂) capture. According to AMP-Ohio, Powerspan is commercially available for SO₂ capture and may be upgraded for CO₂ capture if legislation is enacted to regulate CO₂ emissions (AMP-Ohio Ex. 1 at 5). Further, AMP-Ohio claims that Mr. Furman admitted that IGCC produces CO₂ as part of the process to create electricity (Tr. I at 55-56). AMP-Ohio states that IGCC plants currently operating in the United States do not capture CO₂ and that none of the proposed IGCC projects will be equipped to capture CO₂ (Tr. I at 54-55). In fact, AMP-Ohio contends that neither IGCC nor other coal technologies have been demonstrated with the capability to capture CO₂ (AMP-Ohio Ex. 9 at xiii). AMP-Ohio cites to the testimony of its witness Meyer that AMP-Ohio did consider the potential environmental impacts of CO₂ and that this consideration resulted in the investigation of the Powerspan technology as a potential future means of capturing CO₂ (Tr. II at 121-122).

The Staff recommends that the Board find that the proposed AMPGS meets the requirements of Section 4906.10(A)(3), Revised Code. Staff states that the record shows that AMP-Ohio has a diversified generation mix, including wind, hydroelectric, and landfill gas projects (AMP-Ohio Ex. 3 at 4-5). Staff notes that, while these resources are good secondary generation resources, they are not dispatchable and cannot serve as base load generation (Tr. II at 168-172; Tr. V at 17-20). However, Staff believes that construction of the AMPGS will allow AMP-Ohio to evaluate closure or repowering of older, less efficient generating plants which produce more emissions than the proposed AMPGS

facility, which will allow AMP-Ohio to reduce its overall environmental footprint (AMP-Ohio Ex. 2 at 7-8; Tr. II at 113).

Staff also notes that, with AMP-Ohio's choice of Powerspan technology, there is the potential that CO₂ can be isolated and captured with appropriate retrofitting (Tr. V at 22). Staff specifically included in its revised recommended conditions to the certificate that AMP-Ohio be required to file a separate application with the Board specific to the carbon capture and storage (CCS) equipment, process, and pipeline prior to construction, in the event that the Applicant elects to begin CCS for the AMPGS facility (Staff Ex 2 at 3).

The Citizen Groups argue that certification of the AMPGS project must be denied because the impacts of the facilities CO₂ emissions have not been evaluated or factored into the consideration of the alternatives. Citizen Groups contend that Section 4906.10(A)(2) and (3), Revised Code, require an evaluation of CO₂ emissions and climate change impacts. AMP-Ohio argues that it is irrelevant whether CO₂ emissions are otherwise regulated by Ohio law. The Citizen Groups contend that the Board must find that the proposed facility complies with Ohio's air pollution control statute and regulations *and* determine the facility's probable environmental impact *and* find that the facility represents the minimum environmental impact in light of alternatives. Therefore, the Citizen Groups reason, whether CO₂ emissions are otherwise regulated in no way changes the fact that the Board must evaluate those emissions as part of the environmental impacts and alternative analyses required by Section 4906.10(A), Revised Code.

However, according to the Citizen Groups, neither AMP-Ohio nor the Staff evaluated the impacts of the AMPGS facility's CO₂ emissions. The Citizen Groups allege that three AMP-Ohio witnesses and the Staff witness claimed that they had evaluated probable environmental impacts of the proposed AMPGS project or that they had determined that the AMPGS had determined the minimum adverse environmental impact but that each witness had acknowledged that they failed to evaluate the impacts of CO₂ emissions and global warming in such assessments (Tr. II at 29-30, 94-95, 97, 161; Tr. V at 96). In addition, the Citizen Groups argue that AMP-Ohio's statements regarding the use of Powerspan to control CO₂ Emission are merely speculation and that AMP-Ohio has not made any binding commitment to capture CO₂ emissions from the proposed AMPGS facility (Tr. II at 150, 151-152).

Moreover, the Citizen Groups argue that certification must be denied because AMP-Ohio did not properly evaluate alternatives to the proposed AMPGS facility. The Citizen Groups contend that AMP-Ohio failed to consider alternatives in combination to satisfy the identified energy need. Citizen Groups allege that AMP-Ohio did not fully analyze alternatives in combination. Citizen Groups claim that alternatives were screened out, renewables were capped at 10 percent, energy efficiency was excluded and the

combination of alternatives to be considered was predetermined (Citizen Groups Ex. 6 at 68, 69). Further, Citizen Groups allege that AMP-Ohio's witnesses dismissed alternatives on the grounds that those alternatives alone could not satisfy the entire 960 MW need identified by AMP-Ohio (Tr. II at 168-169, 170-172, 200-201).

The Citizen Groups claim that AMP-Ohio also failed to factor environmental impacts into its consideration of alternatives. The Citizen Groups argue that Section 4906.10(A), Revised Code does not allow an applicant to reject an alternative simply because it might cost a little more. Instead, the statute requires the Board to determine whether there are alternatives with less environmental impact and to consider those alternatives. The Citizen Groups argue that the statute requires the Board to balance the environmental impacts of proposed alternatives, rather than prioritizing the economics over the environment.

Further, the Citizen Groups argue that AMP-Ohio underestimated the CO2 and construction costs for the AMPGS project. Citizen Groups argue that the analysis of alternatives under Section 4906.10(A), Revised Code, can occur only if AMP-Ohio's cost estimates accurately reflect the likely price of CO2 emission and the risk of increased construction costs. Citizen Groups argue that AMP-Ohio has significantly underestimated the cost of future CO2 regulation. Citing the testimony of its witness Schlissel, the Citizen Groups speculate that the cost of CO2 emissions may be significantly higher than the cost used by AMP-Ohio in its analysis (Citizen Groups Ex. 6 at 41). Citizen groups also argue that AMP-Ohio admits that increases in construction costs are "staggering" (Citizen Groups Ex. 6 at 60). Citizen Groups posit that AMP-Ohio has not adequately factored these construction cost increases into its construction cost estimate for the proposed AMPGS project.

The Citizen Groups also argue that certification must be denied because AMP-Ohio improperly rejected less polluting alternatives; therefore, the AMPGS cannot be found to represent the minimum adverse environmental impact. The Citizen Groups claim that AMP-Ohio has entirely ignored energy efficiency as an alternative for satisfying part of the need of generation identified by AMP-Ohio. The Citizen Groups contend that AMP-Ohio's witnesses did not evaluate energy efficiency as one of the alternatives to the proposed AMPGS facility (Tr. II at 41, 42, 94 and 162).

The Citizen Groups also claim that AMP-Ohio improperly rejected wind as an alternative for satisfying part of the need for generation. Citizen Groups allege that AMP-Ohio's witness Kieseewetter admitted that, in reaching his opinion that the proposed AMPGS facility represented the minimum environmental impact in light of other alternatives, he did not evaluate wind power as an alternative (Tr. II at 162). Citizen Groups posit that, while low capacity factor and inability to be dispatched prevent reliance

on wind alone to meet the power need identified by AMP-Ohio, it does not foreclose the use of wind as one part of a combination of alternatives designed to meet the demand identified by AMP-Ohio.

Further, the Citizen Groups believe that AMP-Ohio improperly rejected NGCC as an alternative for satisfying part of the need for generation. The Citizen Groups claim that AMP-Ohio's own testimony shows that natural gas prices are projected to fall between now and 2013 and to remain below their current prices until at least 2030 (AMP-Ohio Ex. 4 at Ex. IC-4; Tr. I at 21). Citizen Groups also claim that the cost estimates prepared by AMP-Ohio comparing the levelized cost of NGCC plants with the levelized cost of PC plants do not justify rejection of NGCC.

Moreover, the Citizen Groups claim that AMP-Ohio improperly rejected IGCC as an alternative for satisfying the need for generation. Citing the testimony of their witness Furman, the Citizen Groups claim that IGCC is an available and cost competitive technology that leads to significantly lower emissions of pollutants and provides commercially proven opportunities to control carbon emissions. In addition, the Citizen Groups argue that, although AMP-Ohio claims that IGCC is less reliable than PC, AMP-Ohio's witnesses acknowledged that, with the use of a backup fuel, the reliability of an IGCC plant is comparable to that of a PC plant (Tr. II at 156). Further, Citizen Groups speculate that, once the cost of carbon capture is factored in, an IGCC plant is projected to have lower cost of electricity than a PC plant (Citizen Groups Ex. 1 at 11-13; Ex. RCF-5, RCF-6; Citizen Groups Ex. 9 at 37).

Finally, the Citizen Groups believe that supercritical pulverized coal would have fewer adverse environmental impacts than the proposed AMPGS facility. Citizen Groups represent that there is no dispute that a supercritical plant would have fewer environmental impacts than the proposed AMPGS facility. Therefore, Citizen Groups argue that the Board should deny certification to the AMPGS facility, as proposed, or require that, if a PC plant is to be built, require that it must be a supercritical unit with an efficiency of at least 38 percent.

In its reply, AMP-Ohio responds that it has not underestimated the costs of the proposed AMPGS project. AMP-Ohio contends that it has carefully considered all costs associated with this project comparatively against costs associated with other power supply options, including continued market purchasing (AMP-Ex. 3 at 7; AMP-Ohio Ex. 4 at 9-14). AMP-Ohio represents that these cost analyses will continue as AMP-Ohio proceeds with the proposed AMPGS project (AMP-Ohio Ex. 16 at 10-11).

AMP-Ohio also disputes the Citizen Groups' argument that AMP-Ohio did not properly evaluate alternatives to the proposed AMPGS facility; AMP-Ohio replies that it

considered a host of generation options to meet the power supply needs of its members. AMP-Ohio states that it recognizes the importance of energy efficiency (Tr. VI at 47). However, AMP-Ohio notes that even the Citizen Groups expert witness concedes that the energy efficiency efforts could achieve, at best, a one to two percent reduction in current power supply needs, without factoring load growth (Tr. III at 78-79).

AMP-Ohio states that it is actively pursuing at least 50 MW of additional wind generation as part of its overall power supply portfolio (AMP-Ohio Ex. 17 at 5). However, AMP-Ohio believes that this additional generation cannot be used as a base load generation source because the capacity factor is between 21 and 23 percent and because wind generation is not dispatchable (AMP-Ohio Ex. 17 at 3-4).

AMP-Ohio notes that it is also pursuing NGCC as an option for its power supply portfolio. However, AMP-Ohio believes that NGCC was not the correct choice as a base load resource due to higher levelized costs and risks associated with the volatility of natural gas prices (AMP-Ohio Ex. 1 at 5). Instead, AMP-Ohio's witness Clark testified that NGCC is best used as an intermediate load resource for this region (AMP-Ohio Ex. 16 at 6-8). AMP-Ohio also contends that it considered IGCC but that IGCC was not selected for the AMPGS because of a number of factors, including lower reliability and availability, lack of vendor warranties, higher cost and lack of load following ability (AMP-Ohio Ex. 1 at 4-5; Tr. II at 57). AMP-Ohio also argues that the testimony at hearing demonstrates that, with respect to air emissions, IGCC plants have no clear, demonstrable, environmental advantage over PC plants (Tr. II at 123).

In their reply, the Citizen Groups contend that the fact that AMP-Ohio may obtain other environmental permits for the proposed AMPGS project does not demonstrate that AMP-Ohio has met the requirements of Section 4906.10(A), Revised Code. Moreover, the Citizen Groups argue that AMP-Ohio has not demonstrated, in the record of this proceeding, that the environmental impact and analysis of alternatives requirements of Section 4906.10(A), Revised Code, have been satisfied.

The Citizen Groups allege that AMP-Ohio has not evaluated the impacts of the proposed facility's CO₂ emissions or factored those impacts into a consideration of alternatives. The Citizen Groups claim that it is irrelevant whether CO₂ emissions are regulated under Chapter 3704, Revised Code or otherwise. The Citizen Groups argues that Section 4906.10(A), Revised Code, requires an evaluation and binding commitment to actually reduce the impacts of CO₂ emissions, rather than a suggestion that CO₂ controls may someday be installed.

Further, the Citizen Groups argue that the existence of older, dirtier coal plants does not demonstrate that the proposed AMPGS facility represents the minimum adverse

environmental impact. The Citizen Groups dispute AMP-Ohio's and Staff's contention that construction of the AMPGS facility will allow AMP-Ohio to move away from other sources of generation which produce more emissions. The Citizen Groups argue that the relevant question is whether the proposed AMPGS facility is the least environmentally damaging alternative, not simply whether it is cleaner than generation resources built decades ago. Moreover, the Citizen Groups argue that there is no evidence that any of these older plants would actually be shut down as a result of the construction of the construction of the proposed AMPGS facility.

Finally, the Citizen Groups claim that AMP-Ohio has improperly rejected less environmentally damaging alternatives. The Citizen Groups state that they are not challenging AMP-Ohio's identified need for additional generation resources. However, the Citizen Groups allege that AMP-Ohio has failed to consider alternatives in combination, not just individually. The Citizen Groups argue that it is AMP-Ohio's burden to evaluate such alternatives and to justify any rejection of them. Citizen Groups conclude that AMP-Ohio has not met that burden.

In its reply, Staff alleges that the Citizen Groups have misstated Ohio law on the issue of whether CO2 emissions are regulated. Staff contends that, under Ohio law, CO2 emissions are currently unregulated by Ohio EPA.

Further, the Staff argues that Section 4906.10(A)(3), Revised Code, does not require choice of an alternative that has no significant environmental impacts. Staff states that, under the plain language of Section 4906.10(A)(3), Revised Code, the determination that the proposed facility represents the minimum adverse environmental impact is required to be made "considering the state of available technology and the nature and economics of the various alternatives." The Staff argues that AMP-Ohio presented extensive evidence regarding its already diversified energy portfolio and that alternative energy sources and energy efficiency measures, either individually or in the aggregate, cannot serve as adequate substitutes for the approximately 1000 MW of base load capacity represented by the proposed AMPGS. Finally, Staff argues that consideration by AMP-Ohio of the relative cost of alternative technologies and the track record of specific technologies to perform to meet base load needs is consistent with the provisions of Section 4906.10(A)(3), Revised Code.

As a preliminary matter, the Board notes that, in the Staff Report, the Staff states that "emissions of CO2 have been associated with climate change, and therefore options are being evaluated world-wide to reduce the amount of CO2 that is being emitted into the atmosphere" (Staff Ex. 1 at 30). No party to this proceeding disputed the Staff's assessment; thus, it should be noted that global climate change, and the degree to which it is caused by CO2 emission was not at issue in this proceeding. All parties to this

proceeding accepted the Staff's premise, and all parties acknowledged the probability of future regulation of CO2 emissions.

Having reviewed the considerable record in this proceeding related to the environmental impacts of CO2 emissions, the Board finds that the nature of the probable environmental impact has been determined, as related to CO2 emissions, as required by Section 4906.10(A)(2). The record contains undisputed evidence that the proposed AMPGS facility will produce 7.3 million tons of CO2 per year (AMP-Ohio Ex. 11, Attachment ES-1 at 1).

Further, the Board finds that, based upon the record in this proceeding, the proposed AMPGS project represents the minimum adverse environmental impact, considering the state of available technology and the nature and economics of the various alternatives and all other pertinent considerations.

In making this finding, the Board finds, based upon the evidence in this proceeding, that there is no feasible combination of energy efficiency measures and generation resources based upon renewable resources which could serve as an alternative to the proposed AMPGS as a base load generation resource. Moreover, the Board finds that AMP-Ohio's selection of PC rather than NGCC or IGCC is reasonable considering the nature and economics of the alternatives. Finally, the Board finds that there is no commercially available technology which provides a means of sequestering carbon at this time.

The Citizen Groups argue that AMP-Ohio has improperly rejected alternatives to the proposed AMPGS facility. We disagree. The record in this proceeding clearly demonstrates that there is no feasible combination of energy efficiency measures and generation resources based upon renewable resources which could serve as an alternative to the proposed AMPGS facility as a base load generation resource.

The Board notes that the proposed AMPGS facility will generate 960 MW of base load electricity. A base load resource must be available 24 hours per day, seven days per week (AMP-Ohio Ex. 3 at 2). Therefore, the relevant comparison of alternatives would be a combination of alternatives which produce 960 MW and is available as a base load resource. With respect to energy efficiency measures, the testimony in this case demonstrates that, at best, energy efficiency measures can reduce generation needs by one to two percent (Tr. III at 78-79). Applied to the total peak load of 3,200 MW currently served by AMP-Ohio and its members (AMP-Ohio Ex. 3 at 3), energy efficiency measures may result in a best case reduction of 64 MW of peak load, without considering projected load growth.

AMP-Ohio already operates a commercial wind farm in this state which generates 7.2 MW of electricity (AMP-Ohio Ex. 17 at 3). At the hearing, testimony by AMP-Ohio's witness Marquis indicated that AMP-Ohio is investigating an additional 50 MW of generation based upon wind (AMP-Ohio Ex. 17 at 5). The Citizen Groups provided no other estimate for the amount of additional wind-based generation which should serve as an alternative to the proposed AMPGS facility. Moreover, the record contains undisputed testimony that wind is not dispatchable and has a capacity factor of 21 percent to 23 percent (AMP-Ohio Ex. 17 at 3).

AMP-Ohio also presented testimony regarding potential hydroelectric projects. At the hearing, AMP-Ohio's witness Kieswetter testified that AMP-Ohio and its members are currently developing three projects totaling 191 MW. In addition, AMP-Ohio and its members are pursuing licenses for two additional projects, totaling 153 MW (AMP-Ohio Ex. 3 at 5-6). However, testimony at the hearing also indicates that the capacity factor for hydroelectric generation in this region is only 50 percent to 60 percent and that hydroelectric generation is not dispatchable (AMP-Ohio Ex. 18 at 6).

In summary, energy efficiency measures may reduce required generation needs by 64 MW. Additional wind-based generation could produce 50 MW albeit with a capacity factor of only 21 percent to 23 percent. Additional hydroelectric generation could produce 340 MW with a capacity factor of 50 percent to 60 percent. These alternatives, even in combination, amount to only 454 MW, far short of the 960 MW which will be produced by the AMPGS, which should have a capacity factor of 85 percent (AMP-Ohio Ex. 4 at 9). Moreover, the substantially lower capacity factors experienced with wind-based and hydroelectric generation and the fact that they are not dispatchable indicate that they are not comparable alternatives to the proposed AMPGS facility.

The Citizen Groups' witness Schlissel testified that further study might demonstrate that a combination of energy efficiency measures, wind, biomass and NGCC could serve as an alternative to the proposed AMPGS facility (Tr. III at 138-139). However, this testimony is of limited value to the Board because Mr. Schlissel admitted that he had not conducted such a study (Tr. III at 139). Therefore, the Board finds that there is insufficient evidence that any feasible combination of energy efficiency measures and generation resources based upon renewable resources could serve as an alternative to the proposed AMPGS facility as a base load generation resource. The Board supports the use of a wide range of generation options, but we recognize that certain technologies are more appropriate to satisfy the need for baseload generation capacity.

Nonetheless, the Board notes that AMP-Ohio has represented that it will pursue these alternatives even if the proposed AMPGS project is approved and constructed. According to AMP-Ohio, these projects would further reduce its dependence on power

purchased from the market and, presumably, further displace power purchased from the wholesale market, which is generated from older, less-efficient coal-fired plants currently serving the market.

Section 4906.10(A)(3), Revised Code, requires the Board to determine that the proposed facility "represents the minimum adverse environmental impact, considering the state of available technology and *the nature and economics of the various alternatives* and other pertinent considerations [emphasis added]." In this case, the record demonstrates that AMP-Ohio's selection of PC rather than NGCC or IGCC is reasonable considering the nature and economics of the alternatives.

With respect to NGCC, AMP-Ohio's witness Clark testified that the levelized cost of NGCC was higher than PC, taking into account estimated future costs of CO2 emission regulation. Mr. Clark further testified that the levelized cost of NGCC was higher than PC using estimated costs of CO2 emission regulation derived from Citizen Groups witness Schlissel (AMP-Ohio Ex. 16 at 6). Moreover, AMP-Ohio witness Couppis testified that an additional factor in AMP-Ohio's decision was the risk of high volatility of natural gas prices (AMP-Ohio Ex. 1 at 5). Citizen Groups argue that the Energy Information Administration is projecting that natural gas prices remain steady through 2030 (AMP-Ohio Ex. 4, Ex. IC-4). However, the evidence demonstrates that natural gas prices did demonstrate a great deal of volatility between 1995 and 2005, the last year of actual data in the record, and Dr. Couppis did state that AMP-Ohio was concerned with the *risk* associated with high volatility of natural gas prices rather than the projected level of prices in the future. Therefore, the Board finds that AMP-Ohio's decision to select a PC plant rather than a NGCC plant was reasonable considering the nature and economics of the alternative.

The Board also finds that AMP-Ohio's decision to select a PC plant rather than an IGCC plant was reasonable, considering the nature and economics of the alternative. The evidence in the record of this proceeding demonstrates that factors such as risk, cost, size, reliability and environmental and operating considerations all supported the selection of PC rather than IGCC (AMP-Ohio Ex. 1 at 4-5). Moreover, the evidence demonstrates that IGCC is not as dispatchable as PC (AMP-Ohio Ex. 1 at 4). Dispatchability is a critical issue to AMP-Ohio and its members because the AMPGS will provide 47 percent of their base load resources when it becomes operational (AMP-Ohio Ex. 3 at SK-7; Tr. II at 57).

The Board notes that Citizen Groups witness Schlissel testified that the proposed AMPGS project did not represent the least-cost, least risk option and that further study was needed. However, this testimony is of minimal probative value in this proceeding because the Citizen Groups did not demonstrate that Section 4906.10(A), Revised Code, requires that the Board approve only the lowest cost, least-risk option. The Board

acknowledges that the statute requires the Board to consider the economics of the various alternatives; however, it does not follow that consideration of the economics of the various alternatives strictly requires the approval only of the least-cost, least risk option. Moreover, the Board notes that the voluminous evidence in the record of this proceeding demonstrates that AMP-Ohio and its members, as well as the Staff, have fully and thoroughly studied that proposed AMPGS project (AMP-Ohio Ex 3 at 7; AMP-Ohio Ex. 11; AMP-Ohio Ex. 13; AMP-Ohio Ex. 15; Staff Ex. 1).

Section 4906.10(A)(3), Revised Code, requires the Board to determine that the proposed facility "represents the minimum adverse environmental impact, considering *the state of available technology* and the nature and economics of the various alternatives and other pertinent considerations [emphasis added]." The Citizen Groups argue that the Board should deny the certificate because the impacts of the proposed AMPGS facility's CO₂ emissions have not been factored into the consideration of alternatives. However, the record in this proceeding clearly demonstrates that the technology to capture and sequester CO₂ is simply not commercially available at this time. A recent study, *The Future of Coal*, which both the Citizen Groups and AMP-Ohio have cited as authoritative, indicates that there "is no operational experience with carbon capture from coal plants and certainly not with an integrated sequestration operation. (AMP-Ohio Ex. 9 at xiii)." Moreover, the Citizen Groups' witness Furman acknowledged that existing IGCC plants in the United States are not equipped to capture and sequester CO₂ (Tr. I at 54-55). Accordingly, the Board finds that there is no commercially available technology which provides a means of capturing and sequestering carbon at this time.

The Board notes that we recently approved the construction of an IGCC facility in this state in *In the Matter of an Application of Columbus Southern Power Company and Ohio Power Company for a Certificate of Environmental Compatibility and Public Need to Construct an Electric Generation Facility in Meigs County, Ohio*, Case No. 06-30-EL-BGN, Opinion, Order and Certificate (April 23, 2007). Our decision in this case should not be interpreted to mean that the Board does not support the continued deployment of IGCC technology. Our decisions, in both this case and in Case No. 06-30-EL-BGN, are limited to the specific facts and circumstances in each case. The Board notes that this is consistent with the recommendations of the *The Future of Coal* study, which cautioned against government agencies attempting to pick a technology "winner" at this point in time (AMP-Ohio Ex. 9 at xiii).

Finally, the Board notes that, in a number of footnotes in their brief, the Citizen Groups state that they are maintaining their objections to a number of evidentiary rulings issued by the administrative law judges during the adjudicatory hearing, but the Citizen Groups do not include any arguments why they believe that the evidentiary rulings were erroneous. The Board has reviewed the record for each noted objection and affirms the

rulings of the administrative law judges. Moreover, the Board notes that, even if we had considered the evidence excluded by the administrative law judges, the evidence would not have changed our findings in this case.

2. Other Environmental Impacts.

With respect to the broader environmental impacts of the proposed AMPGS project, the Staff identified, in the Staff Report, the following probable environmental impacts of the proposed AMPGS project (Staff Ex. 1 at 19-27).

- (1) The proposed project involves the construction and operation of a pulverized coal electric generating facility in Meigs County. The generating facility is proposed to have a net demonstrated capability of 960 MW (summer) with a peak maximum capability of 1,020 MW net output (winter).
- (2) The Applicant plans to operate two steam powered generating units, using pulverized coal as the heat source. Natural gas will also be utilized during startup of the units.
- (3) Air emissions during operation of the proposed facility would include nitrogen oxides (NO_x), sulfur dioxide (SO₂), particulate matter (PM), volatile organic compounds (VOCs), carbon monoxide (CO), and sulfuric acid (H₂SO₄). Continuous Emission Monitors (CEMs) will be installed in order to continually measure and monitor air emissions exiting the stacks.
- (4) Air emissions during construction would include NO_x, SO₂, CO, PM, and VOCs. Because of the relatively low volume of emissions and the temporary nature of construction activities, it is not expected that these emissions would have any significant adverse impacts on-site or beyond the site boundary.
- (5) Two cooling cell structures would be constructed west of the plant footprint. The cooling cells will dissipate waste heat from the electric generation process.
- (6) The tallest structures at the facility would be two chimney stacks, at an elevation of 625 feet above ground level and a diameter at the top of just under 25 feet. No concerns were identified during the course of Staff's coordination with the Ohio Office of Aviation. The

Applicant will, however, have to file for permits with the Federal Aviation Administration (FAA) because of the stack height.

- (7) The Applicant proposes to construct a new 345 kV electric transmission line in order to connect the proposed generating facility to the existing Sporn-Muskingum River 345 kV transmission line, which is located approximately five miles north of the proposed plant site. The new transmission line, and any impacts associated with them, will be the subject of a separate proceeding before the Board (Case No. 06-1357-EL-BTX).
- (8) Depending on the FGD system utilized, wastes consisting of fly ash, bottom ash, water clarification sludge, gypsum, and FGD wastewater treatment sludge will be disposed of in a proposed landfill. The landfill will be roughly 135 acres, and build-out (including all nine cells, haul road, and perimeter access road) will require the removal of numerous trees and other vegetation from approximately 85 acres of upland forest. The Applicant has indicated that clearing and preparation of the landfill area will be done on a cell-by-cell basis, as needed.
- (9) The haul road from the plant to the landfill is planned to utilize a portion of an existing gravel road (East Letart Road, or T-95) as a base. This road is approximately 25 feet wide presently. The Applicant is proposing to re-route this road north of the landfill and widen the existing gravel road to roughly 50 feet. While the use of an existing road is beneficial, the Applicant will need to clear vegetation in order to widen the road.
- (10) There are no state parks, nature preserves, scenic rivers, or wildlife areas within the proposed site boundary. The Letart Mudflats, an ODNR conservation site, is located approximately ½ mile south (upriver) of the proposed plant site along the Ohio River. The proposed facility is also approximately one mile northwest of the Ohio River Lock and Dam Wildlife Area. Both the Ohio River Racine Wildlife Access (4.1 miles) and the Ohio River Oldtown Creek Wildlife Access (4.9 miles) are within five miles of the proposed site. Letart Island, a component of the Ohio River Islands National Wildlife Refuge, is also located within the vicinity (about one mile from the power block) of the proposed facility.

- (11) The Applicant identified 12 wetlands on the site, all of which are associated with the proposed landfill. The aggregate size of the 12 wetlands is 2.2 acres but only approximately 1.1 acres will be filled. The Applicant anticipates filling three category 1 wetlands (0.21 acres total area), and nine category 2 wetlands (0.86 acres total area).
- (12) There are approximately 39,400 linear feet of headwater streams on the project site, the majority of which are located on the eastern portion where the landfill is proposed. The Applicant anticipates filling approximately 10,359 linear feet of headwater channels. The different types of impacted streams are as follows:

Class (HHEI)	Linear feet
III	2,196
II	2,590
Modified II	3,038
I	2,087
Modified I	448

Due to the extent of the proposed disturbance and the quality of some of the headwater streams (Class III being the highest class), the impact to headwater habitat is one of the most significant ecological impacts associated with the proposed project.

- (13) Construction of the project will require clearing about 95 acres of trees. Seventy- nine acres of clearing will be required for the landfill, six acres for the haul road, and ten acres along the Ohio River barge facility. Minimal clearing is required for the plant site, which is predominately agricultural. The impacts of tree removal include the loss of food and habitat for wildlife, increased potential for erosion and sedimentation, and aesthetic impacts.
- (14) The project area, and particularly the proposed landfill location, contains habitat supporting numerous common reptile, amphibian, bird, and mammal species. These species will likely be impacted, both directly and indirectly, during the construction and operation of the proposed facility. Faunal impacts will include the loss of habitat, increased habitat fragmentation, increased disturbance (i.e., noise, lighting, human activity), temporary and permanent displacement, and direct mortality due to construction activities.

- (15) Threatened or endangered species historically in or near the project site include:
- (a) Plants: Records indicate the historical presence of the following three plant species of concern near the project study area: mud-plantain (*Heteranthera reniformis*), common prickly pear (*Opuntia humifusa*), and the smooth buttonweed (*Spermacoce glabra*). The Applicant's field investigations did not identify any of these plant species at the site.
 - (b) Birds: No protected bird species are recorded by ODNR or USFWS as being in the project area nor were any observed during the Applicant's field surveys.
 - (c) Reptiles and amphibians: The eastern spadefoot toad (*Scaphiopus holbrookii*), a state endangered species, is found in sandy soils near river valleys. A survey for the eastern spadefoot found both adults and tadpoles on the site and on adjacent properties. Construction of the facility would result in both direct and indirect impacts to the eastern spadefoot populations located on or near the site.
 - (d) Mammals: The historical range for the black bear (*Ursus americanus*) and the bobcat (*Felis rufus*), both state endangered species, includes the project site. No evidence of these species was identified during field reconnaissance. The project site also falls within the historical range of the Indiana bat (*Myotis sodalis*), a state and federally endangered species. To construct the facility, the Applicant expects to remove approximately 95 acres of trees principally along the river and within the proposed landfill site. This tree clearing could represent the loss of habitat for the Indiana bat, if present at the site. A site assessment found suitable habitat for the Indiana bat at several locations within the site. A mist net survey conducted by BHE Environmental in the summer of 2007 did not capture any Indiana bats at the project site.
 - (e) Aquatic species: Three state-listed fish species historically have been documented within the vicinity of the project site, including the goldeye (*Hiodon alosoides*) which is state

endangered; the speckled chub (*Macrhybopsis aestivalis*), a state endangered species; and the channel darter (*Percina copelandi*), a state threatened species. In addition, the project site is within the historical range of four listed mussel species, including the threehorn wartyback (*Obliquaria reflexa*), a state threatened species, and the following three state and federally endangered mussel species: pink mucket pearly mussel (*Lampsilis abrupta*), fanshell mussel (*Cyprogenia stegaria*), and sheepnose mussel (*Plethobasus cyphus*). To evaluate the potential presence of these particular species, as well as other mollusk species, the Applicant hired EA Engineering to conduct a survey in the summer of 2006 for the segment of the Ohio River for which dredging and construction is planned. During the survey, a total of six live mussels were collected with five different species represented. No federally listed species were captured during the survey; however, one threehorn wartyback was located. Construction and maintenance activities could negatively impact any mussels near the project site through increased siltation from construction activities or direct mortality during dredging activities.

- (16) The Applicant expects to meet its process water needs by withdrawing water from the Ohio River. This withdrawal is planned to occur at a point upstream of the Racine Locks & Dam, near Ohio River mile marker 237. The system will be designed to achieve a maximum makeup water withdrawal of approximately 12,500 gallons per minute (gpm). Average makeup water withdrawal is estimated at approximately 8,300 gpm with the ammonia-based FGD system, 8,600 gpm if limestone FGD is used. Withdrawal at the maximum rate is expected to constitute approximately 0.5% of the 7Q10 low flow along this stretch of river. The Applicant further states that no ground water is anticipated to be used and no aquifers are expected to be directly affected by this project.
- (17) The water intake structures would consist of two offshore cylindrical wedge wire screens. These structures would be located approximately 80 feet from the riverbank, and 15 feet below normal pool levels.

- (18) The plant will include a water storage tank sized to provide one hour of makeup supply, plus 250,000 gallons to be reserved for fire protection located west of the plant. Fire hydrants and on-site fire protection will be provided privately by the Applicant, and the Applicant plans to coordinate local EMS services with the Village of Racine.
- (19) The Applicant intends to obtain its potable water supply for the facility from the local Tupper Plains - Chester Water District that currently serves the Letart Falls area. The Applicant estimates potable water needs during operation of the facility at 10,000 gallons per day. During construction, with a greater number of personnel on site, the needs are estimated at approximately 12,500 gallons per day.
- (20) The facility will employ an oil/water separator in order to remove oil from water which comes in contact with the power block. The oil will be collected and sent off-site for disposal, while the remaining water will be routed to an on-site settling basin prior to discharge to the Ohio River.
- (21) Construction activities are expected to produce both solid and hazardous waste materials. Hazardous wastes are expected to include waste oils, waste vehicle fluids, paints, thinners, solvents, oily rags, oil absorbent materials, welding materials and lead acid batteries. Hazardous waste products, such as waste oils and paints, will need to be disposed of by an authorized hazardous waste management company.
- (22) The facility will include the construction of a packaged sewage treatment plant on-site in order to treat sanitary wastewater prior to discharge to the Ohio River.
- (23) Storm water runoff will be routed into ditches and directed into sediment control ponds prior to discharge to the Ohio River. During construction, the use of best management practices (BMPs) such as silt fencing, reseeding, and straw bales will help control storm water discharges. A storm water pollution prevention plan (SWPPP) will be developed prior to construction.

- (24) Dredging is expected to be necessary during the construction of the barge docking and unloading facilities. Construction of the barge unloading facility will require dredging approximately 70,000 cubic yards of material from within the Ohio River. This material will be disposed of at an on-site pond located in an upland area. The Applicant has also requested from the U.S. Army Corps of Engineers (USACE) permission to dredge an additional 20,000 cubic yards of material for maintenance purposes over a 10-year period.
- (25) The Applicant estimates that 329 acres of vegetable crops and 105 acres of field corn were in production within the proposed facility boundary in 2007. A total of 434 acres of actively-farmed land will be impacted by the project. No Agricultural District properties were identified on the site. Five greenhouses on the plant site and one additional greenhouse on the landfill property will be removed permanently. There is no plan to resume agricultural activities within the facility boundary after construction.
- (26) The majority of the plant site (including major generating equipment) is outside of the 100-year flood zone. The barge facilities and water intake pump house located west of SR 124 will be located within the 100-year flood zone. The Applicant has indicated that structures like the pump house will be elevated above the flood elevation.
- (27) The Applicant states that approximately 75,000 square feet of sheet piling and 20,000 cubic yards of aggregate material in the cells below the ordinary high water mark in the Ohio River will be used in construction of the barge fleet area. Approximately 1,800 linear feet of the upstream fleet area is to be excavated and backfilled with approximately 45,000 cubic yards of stone protection for river bank stabilization. No riverbank excavation or stabilization is proposed for the downstream facility or unloading facility. A channel will be constructed for the unloading facility in-river.
- (28) Twelve mooring cells (six upstream and six downstream), with diameters ranging from 20 to 30 feet, will be installed off-shore to accommodate the approximately 2,600 barges that would be docked and unloaded at the site per year. Six unloading cells, with diameters ranging from 30 to 40 feet will be used to moor barges

and mount a crane and conveyor hoppers. The Applicant has filed information with the USACE regarding the number of barges, turning points and dock alignment in its USACE permit application. The Applicant will continue to coordinate with USACE to minimize impacts associated with river navigation and traffic control.

- (29) There are potential traffic impacts associated with construction of the proposed facility, particularly with increases in traffic on routes leading to the site due to the delivery of equipment and materials. Traffic coordination and management will be required to minimize impacts associated with ingress and egress points, road or lane closures, increased traffic, slow moving truck traffic, air emissions, and dirt and dust.
- (30) Three conveyors connecting the barge loading/unloading facility with the plant are proposed. One conveyor would move coal exclusively to the coal storage area. Another conveyor would move urea, and the third conveyor will take ammonium sulfate (fertilizer) from the plant site to the barges to be loaded. The Applicant is considering combining the urea unloading conveyor and the ammonium sulfate conveyor into one bi-directional conveyor. All conveyors would be enclosed and at a height above SR 124 so as to not impact vehicular traffic. The Applicant will have to obtain a MR505 Road Crossing Permit from the Ohio Department of Transportation for the proposed above-grade conveyor facilities.
- (31) The construction of this generating facility will change the current general aesthetic characterization from a rural setting to industrial in nature. Industrial facilities are not uncommon along the Ohio River.
- (32) There are sensitive land uses in proximity to the proposed plant, such as residences and cemeteries. The nearest residential property in Letart Falls is located over 1,800 feet away from any major plant feature. While plant features would be visible to nearby residents, distance from major components will limit potential impacts. The Applicant will make reasonable efforts to minimize adverse visual impacts by installing fencing and landscaping around its facility.

- (33) Two cemeteries are located within a one-mile radius. A small family cemetery is located approximately 4,000 feet northwest of the facility and the Letart Falls Cemetery is located approximately 2,000 feet south of the facility. The Applicant has agreed to leave current vegetative screening in place at the family cemetery and to provide a substantial amount of additional screening for the Letart Falls Cemetery.
- (34) The Applicant intends to permanently close a portion of East Letart Road (T-95) and Hill Road (T-96). Additionally, some local roads may require substantial restoration following the construction process. The Applicant will be required to coordinate these efforts with the Meigs County Engineer and the Ohio Department of Transportation.
- (35) The only commercial land uses in proximity to the plant are greenhouse buildings and a gravel pit. Both of these commercial uses are compatible with the proposed generating facility and they may remain in operation after construction.
- (36) The construction and operation of the plant is not expected to have any significant negative impact on institutional facilities such as schools or churches, as schools are not in close proximity to the proposed plant and the Applicant will limit construction activities on Sunday.
- (37) The Applicant has completed a noise study of potential impacts expected from construction and operation of the facility. Operational noise is expected to be below 55 dBA at the fence line, which is within generally accepted federal and state standards for sensitive land uses such as nearby residential facilities. Therefore, additional noise mitigation should not be required for normal plant operation. Construction noise levels will be temporary in nature but higher than during plant operation. Pile driving would be the most extreme noise producing activity during construction, at approximately 72 dBA at the nearest sensitive receptor. To help mitigate negative effects of construction noises, the Applicant intends to limit general construction activity to daylight hours.

- (38) The Applicant has conducted cultural resource studies on the site. The Applicant's September 11, 2006 Phase I Archaeology Survey investigated a 505 acre portion of the proposed facility referred to as the Lower Terrace Project Area. An addendum to the study was submitted on November 1, 2006. This addendum covers 495 acres that constitutes the Upper Landfill Project Area. The study found that no archaeological site or structure within the Upper Landfill Project Area is potentially eligible for inclusion on the National Register of Historic Places. With the exception of eight specified sites, no further investigation is recommended for the Lower Terrace Project Area. The Applicant will be required to coordinate further studies of those eight sites with the State Historic Preservation Office. If the sites prove to be eligible for inclusion on the National Register of Historic Places (NRHP), then the Applicant will be required to recover and document artifacts from the sites, or to avoid impacts to those sites during construction and operation of the proposed facility.
- (39) In addition to the archeological site work performed on behalf of the Applicant, architectural reconnaissance investigations (a visual impact study) were performed on and around the site in 2007. The architectural survey found no residential properties within the Area of Potential Effect (APE) that are eligible for listing on the NRHP.
- (40) The Applicant estimates that the total labor payroll for construction of the proposed facility will exceed \$560 million. Construction will generally require 800-1,000 workers, but may employ up to 1,600 workers during peak periods. Operation of the facility will generate annual wages of approximately \$10 million and require about 150 employees. Additional direct and indirect economic benefits are expected in the region during construction and operation of the facility, including purchases of construction materials from local vendors and the use of local goods and services by facility personnel. The Applicant estimates that the facility will generate additional state and local tax revenues in excess of \$1 million annually.
- (41) The project is expected to have a positive impact on regional development. Construction costs for the proposed facility are expected to exceed \$2.3 billion.

- (42) The Applicant anticipates a four-year construction phase, starting in 2009. The Applicant has targeted having the first unit operational in the spring of 2013, and the second unit operational in the fall/winter of 2013, pending various regulatory approvals.

Accordingly, the Staff recommends that the Board find that the nature of the probable environmental impacts has been determined for the proposed facility (Staff Ex. 1 at 28). In addition, the Staff concludes that the project, as proposed, would introduce both temporary and permanent impacts to the project site and surrounding areas. These impacts include social, cultural, and environmental factors. In order to minimize these impacts, the Staff Report included 33 specific conditions which the Staff recommended be required as part of the issuance on any certificate in this proceedings. Subsequently, during the adjudicatory hearing, the Staff submitted a revised set of 34 conditions (Tr. V at 42-44; Staff Ex. 2). With the Staff recommended conditions, the Staff believes that minimum adverse impacts will be realized at the AMPGS project site (Staff Ex. 1 at 40). AMP-Ohio has agreed to the revised recommended conditions (Tr. II at 74-75).

At the hearing, Ms. Young testified that there are a number of endangered species in the area in which the proposed AMPGS facility would be located and that she believed that the Staff Report did not address the effects of the construction of the proposed AMPGS facilities or the cumulative effects of other power plants in the area (Young Ex. 1 at 9).

Based upon the record in this proceeding, the Board finds that the nature of the nature of the probable environmental impact has been determined, as required by Section 4906.10(A)(2), Revised Code, and that the proposed AMPGS facility represents the minimum adverse environmental impact, considering the state of available technology and the nature and economics of the various alternatives and all other pertinent considerations, as required by Section 49056.10(A)(3).

C. Electric Grid (Section 4906.10(A)(4), Revised Code)

AMP-Ohio argues that the proposed AMPGS will be consistent with regional plans for expansion of the electric grid of the systems serving Ohio and interconnected utility systems and that the proposed AMPGS will serve the interests of electric systems economy and reliability as required by Section 4906.10(A)(4), Revised Code (AMP-Ohio Ex. 4 at 5-8; AMP-Ohio Ex. 3 at 9).

The Staff notes that several independent studies demonstrate that, under the current dispatch of generation resources by the regional transmission operators, Ohio, as well as the surrounding region, is in need of additional generation capacity in order to maintain reserve margins. The Staff further notes that electric reserve margins are at historic lows and that AMP-Ohio is in need of additional generating capacity. The Staff concludes that the construction of the proposed facility will enable AMP-Ohio to better meet the future energy demands of its customers and members (Staff Ex. 1 at 41).

Therefore, the Staff recommends that the Board find that the proposed generation facility is sited to be consistent with plans for expansion of the regional power grid as evidenced by the system impact interconnection study performed by the regional systems operations and that the proposed AMPGS facility will serve the interests of electric system's economy and reliability by providing additional power to the regional grid to meet the growing demand of the Applicant's customers served by the electric power grid (Staff Ex. 1 at 41). The intervenors did not present any evidence on this issue or contest this recommendation in their briefs.

Accordingly, based upon the record in this proceeding, the Board finds that the proposed AMPGS is sited to be consistent with plans for expansion of the regional power grid as evidenced by the system impact interconnection study performed by the regional system's operations and will serve the interests of electric systems economy and reliability by providing additional power to the regional grid to meet the growing demand of the Applicant's customers served by the electric power grid.

D. Air, Water, and Solid Waste (Section 4906.10(A)(5), Revised Code).

AMP-Ohio states that Section 4906.10(A)(5), Revised Code, requires that AMPGS to comply with a myriad of Ohio environmental statutes, and AMP-Ohio represents that it will do so (AMP-Ohio Ex. 2 at 9). AMP-Ohio notes that it applied for its initial air permit, a PSD permit to install (PSD Permit) on May 15, 2006. AMP-Ohio notes that on September 13, 2007, the Ohio Environmental Protection Agency (Ohio EPA) issued its draft of the PSD Permit and that, on February 7, 2008, the Ohio EPA issued a final air permit for the proposed AMPGS.¹ AMP-Ohio argues that, pursuant to Chapter 3704, Revised Code, the Ohio EPA cannot issue a PSD Permit without first determining that the PSD permit will address and require the applicant to comply with all source specific applicable Ohio air pollution control laws and regulations.

¹ The final permit was issued after the conclusion of the adjudicatory hearing in this proceeding. In its reply brief, AMP-Ohio asked the Board to take administrative notice of the issuance of the final air permit. Accordingly, the Board takes administrative notice of the issuance of the final air permit by the Ohio EPA on February 7, 2008.

Ms. Young testified that she was concerned that the draft permit did not include discussion of cumulative impacts of air emissions. She believes that construction of the proposed AMPGS facility is bound to lead to significant cumulative effects to air, water and soil resources (Young Ex. 1 at 3-4; Young Ex. 2 at 1).

In the Staff Report, Staff notes that it has reviewed AMP-Ohio's description of compliance requirements under Chapters 3704, 3734 and 6111, Revised Code, for the proposed facility. In addition, the Staff Report states that the Staff has investigated the compliance requirements of the proposed AMPGS under Sections 1501.33, 1501.34, and 4561.32, Revised Code (Staff Ex. 1 at 42-46). The Staff recommends that the Board find that the proposed AMPGS will comply with the requirements specified in Section 4906.10(A)(5), Revised Code. The Citizen Groups did not contest this recommendation in their briefs.

The Board finds that, based upon the record of this proceeding, the proposed AMPGS will comply with the requirements specified in Section 4906.10(A)(5), Revised Code.

E. Public Interest, Convenience, and Necessity (Section 4906.10(A)(6), Revised Code).

AMP-Ohio argues that municipalities are not required to make a statutory showing of public interest, convenience and necessity as such action would "constitute a direct and substantial interference with the city's home rule authority." *Columbus v. Power Siting Commission* (1979), 58 Ohio St.2d 435, 440. However, without waiving this argument, AMP-Ohio claims that it has presented substantial evidence to demonstrate that the AMPGS will serve the public interest, convenience, and necessity. AMP-Ohio cites to the testimony of its witness Kiesewetter, who testified that the AMPGS will serve the public interest, convenience, and necessity (AMP-Ohio Ex. 3 at 9). AMP-Ohio also argues that the intervenors did not present any testimony or evidence regarding this issue.

The Staff argues that the *Columbus* decision cited by AMP-Ohio is inapposite here because AMP-Ohio is not itself a municipality. The Staff avers that AMP-Ohio is a non-profit corporation and does not have any home rule rights or authority under Article XVIII of the Ohio Constitution. The Staff distinguishes this proceeding from the *Columbus* decision case cited by AMP-Ohio because the decision involved an Ohio city that was directly exercising its home rule authority to operate a utility. However, the Staff also argues that the evidence in the record of this case demonstrates that the public interest is served by the proposed AMPGS project.

The Staff Report states that the AMPGS would serve the public interest, convenience, and necessity by providing reliable electric generating capacity to AMP-Ohio's customers and members. The Staff conducted a review of several independent studies, and the Staff believes that these studies demonstrate that Ohio and the surrounding states are in need of additional generation capacity. The Staff notes that AMP-Ohio is also in need of additional generating capacity to serve its load. The independent studies reviewed by Staff included a feasibility study prepared by PJM Interconnection L.L.C. (PJM) and a system impact study prepared by PJM. The system impact study included a stability and short circuit analysis (Staff Ex. 1 at 47).

Based upon its review of the independent studies, Staff concludes that several transmission system upgrades would be required with the addition of the proposed AMPGS facility to the bulk power systems in order to maintain transmission systems reliability during normal operating conditions as well as during periods when there are transmission outages. In addition to the overloads directly caused by the connection of this plant to the grid, PJM has identified four previously identified overloads for which AMP-Ohio will be required to pay a portion of the upgrade. The Staff Report states that there were no problems found from the short circuit study and that, with all transmission facilities in service, the stability study was acceptable (Staff Ex. 1 at 51-52).

The Staff believes that with the upgrades identified in the PJM studies, the proposed AMPGS facility is expected to provide reliable generation to the electric transmission system. The Staff finds that the proposed facility is consistent with plans for expansion of the regional power systems and will serve the interests of electric system economy and reliability. Accordingly, the Staff concludes that the proposed AMPGS will serve the public interest, convenience, and necessity by providing additional electric generation to the regional transmission grid (Staff Ex. 1 at 52).

Moreover, the Staff Report states that in order to evaluate the effect of construction and operation noise on the potential receptors in the surrounding area, AMP-Ohio conducted a reconnaissance of the area to identify site boundaries and local noise sensitive areas. According to the Staff Report, AMP-Ohio identified nine potential noise sensitive areas (Staff Ex. 1 at 52-52). The Staff also notes that elevated electric and magnetic fields (EMF) would be confined to the site and would be attenuated to near background levels at the battery limits. The two 345 kV transmission loops transporting power from the facility will have increased levels of EMF; however, the circuit in the near vicinity of the project is not located close to residential, commercial, or institutional buildings. Further discussion of the EMF emanating from the transmission lines will be addressed in a separate case before the Board, Case No. 06-1357-EL-BTX (Staff Ex. 1 at 53).

The Staff recommends that the Board find that the proposed AMPGS will serve the public interest, convenience, and necessity, as required by Section 4906.10(A)(6), Revised Code. The Citizen Groups did not contest this recommendation in their briefs.

Accordingly, the Board finds that, based upon the record of this proceeding, the proposed AMPGS will serve the public interest, convenience, and necessity, as required by Section 4906.10(A)(6), Revised Code.

F. Agricultural District and Agricultural Lands (Section 4906.10(A)(7), Revised Code).

AMP-Ohio argues that Section 4906.10(A)(7), Revised Code, states that, if a proposed facility is located on land in an existing agricultural district established under Chapter 929, Revised Code, then impacts on the land need to be considered. AMP-Ohio states that AMPGS will be located in Letart Township, Meigs County, Ohio and that the land on which the AMPGS will be located is not an existing agricultural district under Chapter 929, Revised Code (AMP-Ohio Ex. 2 at 9).

Ms. Young testified that she believes that continued agricultural viability of the area would be severely compromised if the Board approves construction of the proposed AMPGS facility (Young Ex. 1 at 5; Young Ex. 2 at 5-6).

The Staff Report also notes that there is no agricultural district land within the boundaries of the proposed AMPGS facility nor any that will be impacted by construction activities (Staff Ex. 1 at 55). The Staff recommends that the Board find that the impact of the proposed AMPGS project on the viability of existing farmlands and agricultural districts has been determined and that such impacts will be minimal. The Citizen Groups did not contest this recommendation in their briefs.

Based upon the record of this proceeding, the Board finds that the proposed AMPGS will have minimal impact upon the viability as agricultural land of any land in an existing agricultural district, established under Chapter 929, Revised Code, that is located within the site of the proposed AMPGS project, as required by Section 4906.10(A)(7), Revised Code.

G. Water Conservation Practice (Section 4906.10(A)(8), Revised Code).

AMP-Ohio contends that the proposed AMPGS project incorporates maximum feasible water conservation practices pursuant to Section 4906.10(A)(8), Revised Code. AMP-Ohio cites to the testimony of its witness Meyer, who testified that the design of the AMPGS consists of the cycling of cooling water through the cooling cells five times.

According to Mr. Meyer, the anti-degradation studies in the AMP-Ohio NPDES permit application demonstrates that this approach minimizes degradation to the Ohio River at a reasonable cost (AMP-Ohio Ex. 2 at 9-10). AMP-Ohio also notes that it was required to perform this anti-degradation analysis prior to receiving an NPDES permit. AMP-Ohio claims that Mr. Meyer's testimony demonstrates that AMP-Ohio considered the various alternatives to its water conservation practices (Tr. II at 117-118).

At the hearing, Ms. Young testified that she is concerned that there has not been sufficient analysis on the impacts to private and public drinking water supplies (Young Ex. 2 at 3). She notes that the Ohio EPA has conducted wellhead protection studies for area wells which determined that the wells are highly susceptible to contamination (Young Ex. 2 at 3; Young Ex. 3). At the hearing, Staff argued that these studies are of no probative value because the proposed AMPGS facility is not in the protection zone addressed by the Ohio EPA studies (Tr. IV at 133-135).

The Staff Report notes that AMP-Ohio intends to incorporate water conservation practices into the technology selected for this project. Water utilization will be minimized in the cooling cells by recycling cooling cell water five times through the system. Cooling cell blowdown water will be reused, in part, as make-up water for the bottom ash conveying system and the FGD system. If the Applicant were to use the limestone based FGD system, all other non-sanitary-wastewater would be re-used as FGD make-up water. FGD blowdown would be treated and released to the Ohio River. Under the ammonia based FGD system, all other non-sanitary-wastewater would be treated and released to the Ohio River, but there would be no FGD blowdown. Under either FGD system, the Applicant intends to use a portion of the storm water runoff from the facility within the facility's water consuming processes (Staff Ex 1 at 56). Therefore, the Staff recommends that the Board find that the proposed AMPGS facility will comply with Section 4906.10(A)(8), Revised Code. The Citizen Groups did not contest this recommendation in their briefs.

The Board finds, based upon the record of this proceeding, that the proposed AMPGS project incorporates maximum feasible water conservation practices considering available technology and the nature and economics of the various alternatives, as required by Section 4906.10(A)(8), Revised Code.

IV. Revised Recommended Conditions:

As part of the Staff Report, Staff recommended that any certificate issued by the Board for the construction of the proposed facility include 33 specific conditions (Staff Ex. 1 at 58-64). At the hearing, Staff submitted a revised set of 34 conditions (Staff Ex. 2). AMP-Ohio has agreed to the revised recommended conditions (Tr. II at 74-75). Specifically, the Staff recommends that:

- (1) That the facility be installed at the Applicant's proposed site as presented in the application filed on May 4, 2007, and as further clarified by the Applicant's supplemental filings.
- (2) That the Applicant shall utilize the equipment and construction practices as described in the application, and as clarified by supplemental filings, and replies to data requests. The Applicant may construct the facility utilizing either subcritical or supercritical boiler design.
- (3) That the Applicant shall implement the mitigative measures described in the application, any supplemental filings, and recommendations Staff has included in this Staff Report of Investigation.
- (4) That the Applicant shall obtain and comply with all applicable permits and authorizations as required by federal and state entities for any activities where such permit or authorization is required prior to the commencement of construction and/or operation of the facility, as appropriate. These permits would include, but not be limited to the following air, water and solid waste pollution control requirements from Ohio EPA:
 - (a) an air PTI and a Title V permit (also known as a Title V Operating permit, application for which must be submitted within twelve (12) months after commencing operation);
 - (b) a NPDES permit for process wastewater, including non-contact cooling water and cooling water blow-down, sanitary waste (to the extent not sent to a publicly owned wastewater treatment facility), and storm water discharge;
 - (c) a 401 Water Quality Certification for stream and wetland impacts and mitigation;
 - (d) general/individual NPDES storm water permit coverage for construction and operation;
 - (e) a permit-to-install for Class III residual waste landfill;

As well as the following other authorizations from other agencies/entities:

- (f) a section 10/404 permit from the U.S. Army Corps of Engineers;
- (g) any necessary approvals from the Federal Aviation Administration;
- (h) a signed Interconnection Agreement with PJM Interconnection, which would include the construction, operation and maintenance of system upgrades necessary to reliably and safely integrate the proposed generating facility into the regional transmission system; and

That the Applicant shall obtain the following permits, authorizations or approvals before proceeding with construction/installation of these aspects of the project:

- (i) a PTI for construction/installation of the treatment works/disposal system associated with the process wastewater;
 - (j) a PTI for sanitary wastewater treatment facilities construction/installation;
 - (k) a plan approval for potable water system connections/installation;
 - (l) water withdrawal registration from the Ohio Department of Natural Resources (ODNR);
 - (m) any other necessary permits and/or approvals to implement the project.
- (5) That a copy of each permit or authorization, including a copy of the original application (if not already provided) and any associated terms and conditions, shall be provided to the Board Staff within seven (7) days of receipt by the Applicant.
- (6) That the Applicant shall file a separate OPSB application specific to the Carbon Capture and Storage (CCS) equipment, process, and pipeline prior to construction in the event that the Applicant elects to begin CCS for this facility.

- (7) That the Applicant shall conduct a pre-construction conference prior to the start of work in each of the following three areas of project work: (1) the solid waste landfill; (2) the main power block; and, (3) the barge dock. Staff will attend each preconstruction conference. Each conference will discuss how environmental and other concerns will be addressed.
- (8) That the Applicant shall perform a final geotechnical analysis of the site (including additional borings, testing and evaluation) prior to the commencement of construction. Findings and the final analysis shall be provided to Staff within seven (7) days of the completion of the geotechnical analysis, prior to the pre-construction conference.
- (9) That the Applicant shall file an amendment before the OPSB and obtain approval prior to construction if it elects to use a sulfur control technology other than Powerspan.
- (10) That the Applicant shall properly install and maintain erosion and sedimentation control measures at the project site in accordance with the following requirements:
 - (a) During construction of the facility, seed all disturbed soil, except within cultivated agricultural fields that will remain in production following project completion, within seven (7) days of final grading with a seed mixture acceptable to the appropriate County Cooperative Extension Service or ODNR's Division of Wildlife for areas within the mitigation area of the Eastern Spadefoot. Denuded areas, including spoils piles and embankments, shall be seeded, and/or mulched and stabilized within seven (7) days, if they will be undisturbed for more than twenty-one (21) days. Reseeding shall be done within seven days of emergence of seedlings as necessary until sufficient vegetation in all areas has been established. Mulching unaccompanied by seeding may only be utilized as part of temporary stabilization outside of the growing season. Areas that were temporarily stabilized without being seeded shall be seeded within seven (7) days of the commencement of the next growing season.

- (b) Inspect and repair all such erosion control measures every seven (7) days and after each rainfall event of one-half of an inch or greater over a twenty-four (24) hour period, and maintain controls until permanent vegetative cover has been established on disturbed areas.
 - (c) Obtain NPDES permits for storm water discharges during construction of the facility. A copy of each permit or authorization, including terms and conditions, shall be provided to the Staff within seven (7) days of receipt. Prior to construction, the construction SWPPP shall be submitted to the Staff for review and acceptance.
- (11) That the Applicant shall employ the following construction methods in proximity to any watercourses:
 - (a) All watercourses, including wetlands, shall be delineated by fencing, flagging, or other prominent means;
 - (b) All construction equipment shall avoid watercourses, including wetlands, except at specific locations where OPSB Staff has approved construction;
 - (c) Storage, stockpiling and/or disposal of equipment and materials in these sensitive areas shall be prohibited;
 - (d) Structures shall be located outside of identified watercourses, including wetlands, except at specific locations where OPSB Staff has approved construction;
 - (e) All storm water runoff is to be diverted away from fill slopes and other exposed surfaces to the greatest extent possible, and directed instead to appropriate catchment structures, sediment ponds, etc., using diversion berms, temporary ditches, check dams, or similar measures.
- (12) That the Applicant shall employ best management practices (BMPs) while working on the project, particularly when working in the vicinity of environmentally-sensitive areas. This includes, but is not limited to, the installation of silt fencing (or similarly effective tool) prior to initiating construction near streams and wetlands. The installation shall be done in accordance with generally accepted construction methods and shall be inspected regularly.

- (13) That the Applicant shall manage contaminated soil found or created on site and construction debris in accordance with Ohio EPA regulations.
- (14) That the Applicant shall have an environmental inspector on site at all times that construction (including vegetation clearing) is being performed in or near a sensitive area such as a designated wetland, stream, river or in the vicinity of identified threatened/endangered species or their identified habitat. This includes all clearing of the proposed landfill site cells.
- (15) That in order to minimize the ecological impact of the landfill, clearing/preparation of the landfill will only be allowed to occur on a cell-by-cell basis. That Applicant shall not utilize Cell 2A, Cell 2B, or any portion of Cell 3A that is currently proposed, as depicted in Figure 4 of the Staff Report, to drain to Pond 2. The Applicant shall file an amendment with the OPSB in the event Applicant at anytime in the future seeks to utilize the areas of the landfill currently identified as Cell 2A, Cell 2B, or any portion of Cell 3A that is currently proposed, as depicted in Figure 4 of the Staff Report, to drain to Pond 2.
- (16) That the Applicant shall submit a stream and wetland mitigation plan for Staff review and acceptance prior to the completion of design. This mitigation plan shall be prepared in coordination with the solid waste permit-to-install and 401 Certification processes. Staff shall receive regular updates as to the status of the required mitigation activities.
- (17) That the Applicant shall submit an Eastern Spadefoot mitigation plan for Staff review and acceptance prior to the completion of design. This mitigation plan shall comply with all ODNR requirements, along with identifying contingency measures in case proposed relocation activities are unsuccessful and/or if construction activities (particularly pile-driving and other earth tremor-causing activity) create problems for the relocated individuals. Staff shall receive regular updates as to the status of the required mitigation activities. The Applicant shall comply with the Eastern Spadefoot mitigation plan as accepted by the Staff. To the extent that the provisions of the mitigation plan provide more specific BMPs for management of storm water associated with development of the relocated breeding/vernal pools, and/or seeding and stabilization of all related disturbed

areas the provisions of the mitigation plan shall control rather than the provisions of Condition 10 a and Condition 12. Applicant may commence the limited earthmoving associated with relocation of breeding/vernal pools in accordance with the mitigation plan as accepted by the Staff in advance of the issuance of the other permits listed in Condition 4 and in advance of the preconstruction conference, notwithstanding the provisions of Condition 4 or 7 to the contrary, once Applicant has received an individual or general NPDES permit for construction storm water.

- (18) That the Applicant shall submit a terrestrial habitat mitigation plan for Staff review and acceptance prior to the completion of design. This mitigation plan shall preserve as much wooded area adjacent to the proposed landfill as practicable through deed restriction or conservation agreement. This wooded area shall be at least comparable in size to the wooded area cleared for construction of the landfill and associated facilities, and shall include as much headwater stream habitat as practicable. This preservation shall be assured prior to clearing of the landfill area. The plan shall also include implementation details for the Applicant's proposed Ohio River floodplain reforestation activity.
- (19) That the Applicant only remove trees representing potential Indiana Bat habitat from the site between September 16 and April 14, unless specific pre-approval is granted by Staff.
- (20) That Staff, ODNR's Division of Wildlife and United States Fish and Wildlife Service, as appropriate shall be immediately contacted if threatened or endangered species are discovered on-site during construction.
- (21) That the Applicant shall not dock or stage barges at Letart Island or in its backchannel.
- (22) That the Applicant shall not dispose of gravel or any other construction material during or following construction of the facility by spreading such material on agricultural land outside of the facility boundary as depicted on Figure 2 of the Staff Report. For purposes of this condition, "gravel or any other construction material" shall not include materials spread or moved as part of mitigation activities. All construction debris

shall be promptly removed and properly disposed of after completion of construction activities.

- (23) Any construction work for this facility that occurs in the 100-year floodplain and floodway should be conducted in accordance with good engineering practices and in a manner consistent with the minimum flood protection criteria of the National Flood Insurance Program. Pertinent modeling and hydrologic studies will be coordinated with ODNR and Staff prior to final engineering of the facility.
- (24) That if the Board certifies the facility, the Applicant will conduct further cultural resource studies to determine if any of the eight identified sites from the Phase I study are eligible for inclusion on the National Register of Historic Places. This survey shall be coordinated with the State Historic Preservation Office and submitted to Staff for review and acceptance at least ninety (90) days prior to construction. If the survey discloses a find of cultural significance that could be eligible for inclusion on the National Register of Historic Places, then the Applicant shall submit an avoidance and/or mitigation plan for Staff's acceptance. The Applicant shall consult with Staff to determine the appropriate course of action.
- (25) Any permanent road closures, road restoration or road improvements necessary for construction and operation of the proposed facility shall be coordinated with the Meigs County Engineer, the Ohio Department of Transportation, local law enforcement, and health/safety officials. Additionally, the Applicant shall obtain all required highway crossing permits, including but not limited to a MR505 Road Crossing Permit, from the Ohio Department of Transportation for proposed above-grade conveyor facilities.
- (26) General construction activities shall be limited to daylight hours Monday through Saturday. Impact pile driving operations shall be limited to weekday hours between 8:00 AM and 5:00 PM. Construction activities that do not involve noise increases above background levels at sensitive receptors are permitted when necessary.
- (27) That the Applicant shall measure all sound levels at the most critical NSAs to assure that the sound levels emanating from the

facility during operation will not increase the Ldn (sound level day/night) above 55 dBA. Where the sound levels are greater than 55 dBA and the incremental increase is greater than 3 dBA, the Applicant shall submit a mitigation plan for Staff review and approval.

- (28) The Applicant shall submit a general facility landscape plan for Staff review at least 60 days prior to commencement of construction. The plan shall include methods to mitigate visual and sound impacts associated with the project on Letart Falls Cemetery. The Applicant shall also maintain vegetative screening at the family cemetery northwest of the plant across State Route 124. The Applicant will consult with SHPO for input on screening methods and techniques appropriate to minimize impacts to the adjacent cemetery.
- (29) That the Applicant provide access for the public to Letart Falls Cemetery and the family cemetery west of State Route 124.
- (30) That any structures acquired by the Applicant shall be maintained or removed from the property.
- (31) That at least 45 days before the pre-construction conference, the Applicant shall submit to the Staff, for review and approval, one set of detailed drawings for that portion of the proposed project so that the Staff can determine that the final project design is in compliance with the terms of the certificate.
- (32) That the Applicant shall provide to the Staff the following information as it becomes known:
 - (a) The date on which construction will begin;
 - (b) The date on which construction was completed;
 - (c) The date on which the facility began commercial operation.
- (33) That the certificate shall become invalid if the Applicant has not commenced a continuous course of construction of the proposed facility within five years of the date of journalization of the certificate.
- (34) Where information is required to be submitted for Staff acceptance or approval under these conditions, the Staff agrees

that it will respond within 30 days of receipt of Applicant's information unless a different time period is mutually agreed upon. After reasonable effort to informally resolve any disagreement, either the Staff or the Applicant may petition the Board for resolution.

V. Conclusion:

Based upon the record in this proceeding, the Board finds that all the criteria established in Section 4906.10(A), Revised Code, are satisfied for the construction, operation, and maintenance of the proposed AMPGS project, subject to the revised recommended conditions set forth above.

Accordingly, based upon the record in this proceeding, the Board hereby issues a certificate to AMP-Ohio for the construction, operation, and maintenance of the project as proposed in its application filed in this case on May 4, 2007, as supplemented on June 11, 2007, and June 19, 2007, subject to the 34 conditions set forth in Section IV of this Order.

FINDINGS OF FACT:

- (1) AMP-Ohio is a nonprofit municipal power system organized in 1971. AMP-Ohio was formed to own and operate electric facilities in order to provide generation, transmission, and distribution of electric power to its members. AMP-Ohio currently provides wholesale power and services to 121 member municipal electric systems in five states including 81 in Ohio.
- (2) The proposed AMPGS project is a "major utility facility," as defined in Section 4906.01(B)(2) of the Ohio Revised Code.
- (3) On December 5, 2006, a public informational meeting regarding the proposed project was held in Meigs County, Ohio, from 7:00 PM to 9:00 PM.
- (4) On November 29, 2006, AMP-Ohio filed with the Board notice of publication of the newspaper notices regarding the public informational meeting.
- (5) On May 4, 2006, AMP-Ohio filed the application for the proposed AMPGS facility with the Board, initiating the completeness review process.

- (6) On June 11, 2007, and June 19, 2007, AMP-Ohio filed supplemental information regarding its application in this proceeding.
- (7) On June 29, 2007, the Board notified Applicant that its Application was complete.
- (8) On July 20, 2007, AMP-Ohio filed proof of service of the Application with local officials and libraries in accordance with Rule 4906-5-08, O.A.C.
- (9) By entry dated August 2, 2007, the administrative law judge scheduled the public hearing regarding the certified applications for November 1, 2007.
- (10) On September 19, 2007, and October 24, 2007, AMP-Ohio filed proofs of publication in the local newspapers of the initial public notices required by Rules 4906-5-08(B) and 4906-5-09, O.A.C.
- (11) On October 16, 2007, Staff issued and filed its "Staff Report of Investigation" for the proposed AMPGS project, recommending that a Certificate of Environmental Compatibility and Public Need be issued for the AMPGS project, as described in the application and subject to conditions enumerated within the Staff Report.
- (12) On January 3, 2008, AMP-Ohio filed copies of letters describing the AMPGS to each property owner within the planned site and to each property owner who may be approached by AMP-Ohio for any additional easements necessary for the construction, operation, or maintenance of the AMPGS, as well as copies of the letters providing notice to each local official entitled to service of the application.
- (13) The local public hearing was held on November 1, 2007, Meigs High School, 42091 Pomeroy Pike, Pomeroy, Ohio.
- (14) The adjudicatory hearing commenced on November 8, 2007, at the offices of the Public Utilities Commission, 180 East Broad Street, Columbus, Ohio. The hearing continued on December 11, 2007, December 12, 2007, December 17, 2007, through December 19, 2007, and January 4, 2008.

- (15) Adequate data on the proposed project has been provided to the Board and Staff to determine the nature of the probable environmental impact of the proposed facility, as required by Section 4906.10(A)(2), Revised Code.
- (16) Adequate data on the proposed project has been provided to the Board and Staff to determine that the facility represents the minimum adverse environmental impact, considering the available technology and nature and economics of the various alternatives, and other pertinent considerations, as required by Section 4906.10(A)(3), Revised Code.
- (17) Adequate data on the proposed project has been provided to the Board and its Staff to determine that the proposed AMPGS is sited to be consistent with plans for expansion of the regional power grid as evidenced by the system impact interconnection study performed by the regional systems operator and will serve the interests of electric systems economy and reliability by providing additional power to the regional grid to meet the growing demand of the Applicant's customers served by the electric power grid, as required by Section 4906.10(A)(4), Revised Code.
- (18) Adequate data on the proposed project has been provided to the Board and its Staff to determine that the proposed facility will comply with Chapters 3704, 3734, and 6111 of the Revised Code, Sections 1501.33, 1501.34, and 4561.32, Revised Code, and all regulations adopted thereunder, all as required by Section 4906.10(A)(5), Revised Code.
- (19) Adequate data on the proposed project has been provided to the Board and its Staff to determine that the proposed facility will serve the public interest, convenience, and necessity, as required by Section 4906.10(A)(6), Revised Code.
- (20) Adequate data on the proposed project has been provided to the Board and its Staff to determine the proposed facility's impact on the viability as agricultural land of any land in an existing agricultural district established under Chapter 929 of the Revised Code, as required by Section 4906.10(A)(7), Revised Code.

- (21) Adequate data on the proposed project has been provided to the Board and its Staff to determine that the proposed facility incorporates maximum feasible water conservation practices, considering the available technology and nature and economics of the various alternatives, as required by Section 4906.10(A)(8), Revised Code.
- (22) The information, data, and evidence in the record of this proceeding provide substantial and adequate evidence and information to enable the Board to make an informed decision on the Application for the proposed project.

CONCLUSIONS OF LAW:

- (1) AMP-Ohio is a "person" under Section 4906.10(A), Revised Code.
- (2) The proposed AMPGS project is a "major utility facility" as defined by Section 4906.01(A)(2), Revised Code.
- (3) AMP-Ohio's application, as supplemented on June 11, 2007, and June 19, 2007, comply with the requirements of Chapter 4906-15, O.A.C.
- (4) Consideration of the basis of the need for the proposed electric generation facility is not required by Section 4906.10(A)(1), Revised Code.
- (5) The record establishes the nature of the probable environmental impact from construction, operation, and maintenance of the proposed AMPGS, as required by Section 4906.10(A)(2), Revised Code.
- (6) The record establishes that the proposed AMPGS project represents the minimum adverse environmental impact, considering the state of available technology and the nature and economics of the various alternatives, and other pertinent considerations, as required by Section 4906.10(A)(3), Revised Code.
- (7) The record establishes that the proposed AMPGS is sited to be consistent with plans for expansion of the regional power grid as evidenced by the system impact interconnection study performed

by the regional systems operator and will serve the interests of electric system's economy and reliability by providing additional power to the regional grid to meet the growing demand of the Applicant's customers served by the electric power grid, as required by Section 4906.10(A)(4), Revised Code.

- (8) The record establishes that the proposed AMPGS project, if conditioned in the certificate as recommended by the parties, will comply with Chapters 3704, 3734, and 6111 of the Revised Code, and all rules and regulations adopted under those chapters, and under Sections 1501.33, 1501.34, and 4561.32, Revised Code, all as required by Section 4906.10(A)(5), Revised Code.
- (9) The record establishes that the proposed AMPGS project will serve the public interest, convenience, and necessity, as required by Section 4906.10(A)(6), Revised Code.
- (10) The record establishes that the impact of the proposed AMPGS project on the viability as agricultural land of any land in an existing agricultural district established under Chapter 929 of the Revised Code has been determined, as required by Section 4906.10(A)(7), Revised Code.
- (11) The record of this proceeding establishes that the proposed AMPGS project incorporates maximum feasible water conservation practices, considering available technology and the nature and economics of the various alternatives, as required by Section 4906.10(A)(8), Revised Code.

ORDER:

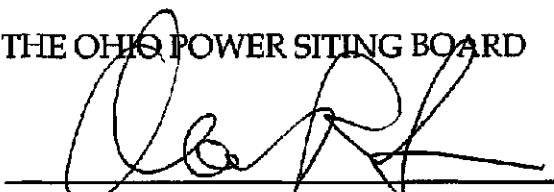
It is, therefore,

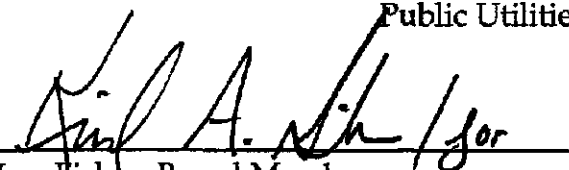
ORDERED, That a certificate be issued to American Municipal Power-Ohio, Inc., for the construction, operation, and maintenance of the project. It is, further,

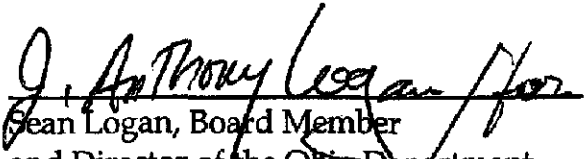
ORDERED, That the certificate contain the 34 conditions set forth in Section IV of this Opinion, Order, and Certificate. It is, further,

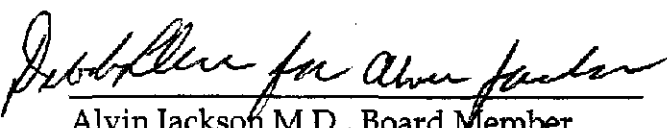
ORDERED, That a copy of this Opinion, Order, and Certificate be served upon each party of record and any other interested persons.


THE OHIO POWER SITING BOARD


 Alan R. Schriber, Chairman of the
 Public Utilities Commission of Ohio


 Lee Fisher, Board Member
 and Director of the Ohio Department
 of Development


 Sean Logan, Board Member
 and Director of the Ohio Department
 of Natural Resources


 Alvin Jackson M.D., Board Member
 and Director of the Ohio Department
 of Health


 Christopher Korleski, Board Member and
 Director of the Ohio
 Environmental Protection Agency

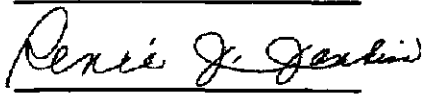

 Robert Boggs, Board Member and
 Director of the Ohio Department
 of Agriculture

ABSTAIN
 Andrew M. Boatright, P.E., Board
 Member and Public Member

GAP/KB:ct

Entered in the Journal

MAR 03 2006


 Renee J. Jenkins
 Secretary