

Comment Response Document

***Commonwealth of Pennsylvania
Department of Environmental Protection***

*Archbald Energy Partners, LLC
Permit Decision
Plan Approval 35-00070A
Borough of Archbald, Lackawanna County*

***Response to Public Testimony
Received at Public Hearing on October 26, 2016***

April 28, 2017

Department of Environmental Protection

www.depweb.state.pa.us

PROJECT DESCRIPTION

On September 24, 2016, the Pennsylvania Department of Environmental Protection (Department or DEP) published in *The Pennsylvania Bulletin* a Notice of Intent to Issue Plan Approval No. 35-00070A for Archbald Energy Partners, LLC (“Archbald Energy” or “Permittee”). The Plan Approval proposes to construct and operate a natural-gas-fired combined-cycle (NGCC) power plant to produce approximately 485 MW of electricity in Archbald Borough, Lackawanna County (“Facility”). The project is described more fully in the Permittee’s February 2, 2016, Plan Approval Application and supplements to that Application. This Plan Approval is for the construction and operation of a natural-gas-fired combined-cycle power plant consisting of a combustion gas turbine (“CT”) and a steam turbine (“ST”) with duct burners in the heat recovery steam generator (“HRSG”), one diesel-fired emergency generator, one diesel-fired fire water pump, an air-cooled condenser, and one aqueous ammonia storage tank.

The Permittee will operate a GE model 7HA.02 combined cycle natural-gas-fired turbine, or equivalent, at the Facility. The HRSG will be equipped with a natural-gas-fired duct burner. The maximum heat input rating of the CT is 3,269 MMBTUs/hr. The duct burner will have a maximum heat input rating of 111 MMBTUs/hr. The Permittee proposes to control nitrogen oxides (“NOx”) emissions using a Dry Low-NOx combustor and selective catalytic reduction (“SCR”). The Permittee will also use combustion controls and oxidation catalysts to control carbon monoxide (“CO”) and volatile organic compound (“VOC”) emissions, respectively.

The 670 bhp diesel-fired emergency generator and the 450 bhp diesel-fired fire pump will be restricted to a maximum of 100 hours of operation each, in any 12-consecutive month period, for non-emergency operation. The maximum sulfur content of the diesel fuel fired in these engines will be 15 parts per million (“ppm”).

Several comments were received during a 30-day written comment period following publication of the Department's notice of application received. During that comment period, requests to conduct a public hearing were received. On October 26, 2016, in accordance with 25 Pa. Code §§ 127.48, and 271.823, the Department held a public hearing at the Valley View High School concerning the proposed Plan Approval application No. 35-00070A. The hearing was advertised in a local newspaper of general circulation.

The following individuals commented during public hearing and/or submitted written comments concerning the Plan Approval application for the proposed facility. The list includes individuals who provided names at either the public hearing or with their written comments.

LIST OF COMMENTERS

<u>The following is a list of individuals who provided comments to the Department on Plan Approval Application No. 35-00070A</u>	
1.	Joe Rogan
2.	Deirdre Lally – Clean Air Council
3.	Bill Pickard
4.	Mary McKane
5.	Kelly Finan
6.	Carolyn Mizanty
7.	Jeff Smith
8.	Allison Petryk
9.	Jason Patrochko
10.	Ron Arezzoni
11.	Paula Ralenstonneish
12.	John Mellow (Written comments submitted to DEP)

This document briefly summarizes written comments and oral testimony presented during the public hearing and public comment period, and provides the Department’s response to relevant comments received. The comments are not intended to be a complete summary of everyone’s testimony, but rather to identify the issue or comment raised and provide the context for the Department’s response. The Department’s responses are generally limited to the Air Quality Plan Approval Application process and the Department’s authority under the Pennsylvania Air Pollution Control Act, the regulations promulgated thereunder, the federal Clean Air Act, and the federal regulations promulgated thereunder. The testimony of each individual was transcribed, is available in its entirety at the Department's Northeast Regional Office, and may be accessed by any person wishing to review it by scheduling a file review with the Department at (570) 826-2511.

Public Comments and Department Responses

1. Comment: Commenter(s) expressed general concerns about health & environmental effects from the emissions associated with the facility. (Joe Rogan, Deirdre Lally, Bill Pickard and Allison Petryk)

Response: The protection of human health and the environment is fundamental to permitting under the Federal Clean Air Act (“CAA”) and the Pennsylvania Air Pollution Control Act. Permit programs under these Acts were designed and are implemented with the protection of public health and the environment as overarching goals. The Department is required to protect the health and welfare of all citizens of Pennsylvania and the public’s right to clean air. A Plan Approval cannot be issued unless the Department determines that the proposed project will satisfy all applicable regulations and the emissions will not cause or contribute to a violation of the National Ambient Air Quality Standards (“NAAQS”), which are designed to protect public health and welfare.

There are two types of NAAQS for six criteria pollutants - sulfur dioxide [SO₂], particulate matter [PM], nitrogen oxides [NO_x], carbon monoxide [CO], ozone [O₃] and lead [Pb]. The first type, Primary Standards, are designed to protect human health, taking into consideration sensitive populations, including children, the elderly and individuals with respiratory ailments. The second type, Secondary Standards, are designed to protect public welfare, including effects on soils, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility, property, and climate, as well as effects on economic values and on personal comfort and well-being. The emissions from the proposed facility were evaluated to ensure that they would not violate or exceed Primary or Secondary NAAQS.

States are given primary responsibility for achieving the NAAQS through State Implementation Plans (“SIPs”). Under Section 110 of the federal Clean Air Act (42 U.S. Code § 7410), states are required to develop SIPs that provide for implementation, maintenance, and enforcement of the NAAQS, and those SIPs include provisions for the permitting of new and modified sources. States like Pennsylvania are to review and issue permits for minor new sources of emissions, such as the plant proposed by Archbald Energy Partners, LLC, as well as minor modifications at existing sources, under their approved SIPs. These SIP requirements under Section 110 of the CAA, as well as the associated regulations, are intended to ensure the protection of the NAAQS, and therefore public health and welfare.

Included in Pennsylvania’s SIP are the Department’s Best Available Technology (“BAT”) requirements, which are part of the air quality permitting process. Plan Approval applicants are required to show that emissions will be the minimum attainable using BAT. See 25 Pa. Code §§ 127.1 and 127.12. Adherence to these BAT requirements, as well as the other requirements in

the Plan Approval and applicable state and federal regulations, will help ensure that the proposed sources do not have a significant impact on regional air quality.

To ensure protection of air quality, the Department has included required emission limitations and operating conditions in the Plan Approval that will be verified through stack testing and reporting requirements. These emission limit and operating conditions are designed to protect against health & environmental effects from emissions associated with the Facility.

2. Comment: Commenter(s) said use of natural gas as a fuel to produce power will be disastrous to air quality and climate change. The project will ensure a future of increased climate changes and air contamination from the increase in the use of natural gas, its exploration and production. (Deirdre Lally, Kelly Finan and Allison Petryk)

Response: The Department does not prohibit the use of natural gas as a fuel to produce power. It is largely considered to be a clean burning fuel that is available, economical and dependable. These are primary reasons for why natural gas has been the choice fuel for many new electric producing power plants and for the replacement of older, higher-polluting coal-fired power plants.

The increase in demand for electricity in the country is driving the need for new power plants, and the permitting programs established under the federal Clean Air Act and the Pennsylvania Air Pollution Control Act limit the emissions from those new plants. In Pennsylvania, facilities like the Permittee's are required to control emissions of air pollutants to the maximum extent, consistent with BAT, as determined by the Department. Furthermore, the Department imposes requirements and controls on the production and transmission of natural gas to facilities like the Permittee's. This helps to reduce emissions of air pollutants, including greenhouse gases.

3. Comment: Commenter(s) concerned about quality of life (Bill Packard, Mary McKane and Carolyn Mitanty)

Response: The Pennsylvania Air Pollution Control Act provides, in part, that the Commonwealth's policy is to protect air resources to the degree necessary for the protection of public health, safety and the well-being of its citizens, while allowing for development, attraction and expansion of industry and commerce. (35 P.S. § 4002(a)). The Department focuses on the public's right to environmental protection, including clean air, in reviewing Plan Approval applications. In doing so, the Department ensures that a proposed project can comply with applicable environmental laws and it includes conditions in the Plan Approval that limit environmental impacts from the proposed Facility.

Based on its review of Archbald Energy's Plan Approval Application, the Department has determined that the Facility can operate in compliance with the Pennsylvania Air Pollution Control Act and regulations, that its impacts will be limited, and that the project will not violate the public's right to clean air.

and will not clearly outweigh the benefits of the project, and that the project will not violate the public's right to clean air.

In addition, the Department does not have any indication that the Facility will detract from the quality of life of residents. The Facility will be in a newly created heavy industrial area where power plants are allowed as a conditional use. On July 13, 2016, Archbald Borough Council voted 4-3 to approve zoning amendments that created a 430-acre, I-3, heavy industrial zone in which power plants are allowed as a conditional use. Archbald Energy then began to pursue conditional use approval from the Borough. The Department's understanding is that obtaining conditional use approval included review by the Lackawanna County Planning Commission. In September 2016, the County Planning Commission recommended approval, provided three comments were addressed and applicable permits were acquired. The Archbald Borough Planning Commission also reviewed the land development plans for the project over an extended period of time. On December 8, 2016, the Archbald Planning Commission voted, "to grant conditional approval of the Land Development plans, based on compliance with other applicable approvals." (December 8, 2016 meeting minutes). The Department believes that quality of life issues, as well as those related to property values, pristine areas and tourism, fall within the scope of local land use reviews and approvals and does not believe that issuance of the plan approval, with protective conditions, will diminish the quality of life in the area.

4. Comment: Commenter(s) concerned about property values, pristine area & tourism. (Bill Packard, Mary McKane, Carolyn Mitanty and Allison Petryk)

Response: Please refer to Response No.3 above, particularly the language regarding local land use reviews and approvals.

5. Comment: Commenter(s) concerned about economic & industrial growth. (Bill Packard and Mary McKane)

Response: Please refer to Response No.3 above, particularly the language regarding local land use reviews and approvals. In addition, as stated in response to Comment No. 3 above, the Pennsylvania Air Pollution Control Act provides, in part, that the Commonwealth's policy is to protect air resources to the degree necessary for the protection of public health, safety and the well-being of its citizens, while allowing for development, attraction and expansion of industry and commerce. (35 P.S. § 4002(a)). The Department believes that the air quality permitting process and inclusion of conditions in the Plan Approval will ensure the protection of public health and welfare. For more information on this concern, please refer to Response No. 1 above.

6. Comment: General concern about particulate emissions & its health effects along with aggregating emissions from Invenergy plant. (Kelly Finan, Carolyn Mizanty, Jason Petrochok, Ron Arezzoni and Paula Ralenstonneish)

Response: Please refer to Response No. 1 above. In addition, Archbald Energy Partners is classified as a "minor" source of emissions, based upon emissions of the criteria pollutants (SO₂,

PM, NO_x, CO, O₃ and Pb). By comparison, the Lackawanna Energy Center is classified as a “major” source of emissions, because its emissions are at or above threshold levels for major facilities. Accordingly, it is subject to the federal Prevention of Significant Deterioration (“PSD”) Program, which includes the need to perform an air quality dispersion modeling analysis. The modeling analysis takes into consideration emissions from the proposed sources at the Lackawanna Energy Center, as well as other sources of emissions in the area.

When Lackawanna Energy submitted a revision to its Plan Approval to account for a reconfiguration of the plant layout, the Department required the company to perform a revised air quality dispersion modeling analysis and directed it to include emissions from the proposed Archbald Energy facility. The results of the revised modeling demonstrated that emissions from both proposed facilities would not cause or contribute to air pollution in violation of the NAAQS, which are designed to protect public health, welfare and the environment. In addition, the analysis adequately demonstrated that emissions from Lackawanna Energy and Archbald Energy Partners, in combination with anticipated emissions due to general commercial, residential, industrial, and other growth associated with the facilities, will not impair visibility, soils, and vegetation.

The Department's technical review of the modeling for the project concluded, in part, that:

- Proposed emissions will not cause or contribute to air pollution in violation of the NAAQS for PM₁₀ and PM_{2.5}; and
- Proposed emissions will not cause or contribute to air pollution in violation of the PSD increment standards for PM_{2.5} and PM₁₀.

The Archbald Energy Partners Facility will fire natural gas exclusively as a fuel, which has inherently low particulate emissions compared to other fuel sources. In addition, particulate emission controls for the project will be high-efficiency inlet air filters, which satisfies the Department’s BAT requirements for controlling particulate emissions. Archbald Energy will be required to demonstrate compliance with the emission limits in the Plan Approval by performing a stack test every two years. Based on these considerations, the Department does not believe that the Archbald Energy Facility will give rise to adverse health effects associated with particulate emissions.

7. Comment: Commenter(s) concerns about effect of toxic air emissions on public health, air, soil and water from the several proposed plants in the area. (Carolyn Mitanty and Allison Petryk)

Response: Please refer to Response Nos. 1 and 6 above. Response No. 1 discusses measures taken to ensure compliance with the NAAQS, of which there are two types: Primary Standards and Secondary Standards. The Primary standards are set to protect human health and Secondary Standards are set to protect public welfare. Under the federal Clean Air Act, “effects on welfare includes, but is not limited to, effects on soils, water, crops, vegetation, manmade materials,

animals, wildlife, weather, visibility, and climate, damage to and deterioration of property, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being...” (42 U.S.C. § 7602(h)). The air quality dispersion modeling discussed in Response No. 6 above helps ensure that projected emissions from the Facility will not cause an exceedance of the NAAQS under operating conditions.

8. Comment: Commenter(s) wanted question and answer session. (Jeff Smith, Jason Petrochok and John Mellow)

Response: In the spring of 2016, the Department was contacted by one individual who requested a public meeting on the draft Plan Approval. Public meetings are question and answer sessions, as opposed to public hearings, where the public is offered an opportunity to express comments and concerns they have about the project. Those comments then become part of a transcribed record and the Department drafts a comment response document, such as this one, to respond to those comments and concerns. There were no additional requests for a public meeting.

Public meetings and hearings are not required for an application like the one submitted by Archbald Energy, but may be held by the Department. (25 Pa. Code § 127.48). The Department’s decision to hold a meeting or hearing is based on several considerations, such as the nature of the proposed project, the level of public interest in the proposed project, whether there has been sufficient opportunity to provide public comment, and the amount and type of public comments received during the Plan Approval application review process. After evaluating the concerns being raised during the public comment period and the type of project being proposed, the Department, in this case, determined that it would hold a public hearing in addition to accepting written comments. A public hearing can be a useful way to address individual comments since they are clearly captured and transcribed in the record, and the Department can avoid confusion by providing written responses that are specific to the comments received. By holding a public hearing, and extending the period for submission of written comments, the Department believes that it provided sufficient opportunity for the public to provide comments on the Plan Approval application.

9. Comment: Commenters(s) said not enough public notices or information was provided for this project (Bill Pickard, Jason Petrochko and John Mellow)

Response: The Department refers the commenters to its response to Response No. 8 above. In addition, the Department notes that it published notice of receipt of the Plan Approval application and notice of intent to issue the Plan Approval in the Pennsylvania Bulletin. A notice announcing the date and location of the public hearing was also published in the Scranton Times newspaper. Copies of the Plan Approval application and draft Plan Approval were made available at the Department’s Northeast Regional Office in Wilkes-Barre during the public comment period so that the public could review the documents in advance of providing comments to the Department.

Archbald Energy Partners also complied with the requirements for notification of a Plan Approval application by submitting certified letters to Archbald Borough and Lackawanna

County. The letters submitted to the Borough and County described the sources that Archbald Energy plans to construct. Additionally, the letters announced a 30-day comment period that began upon receipt of the notice.

The Department believes that the steps taken to inform the public about the proposed project, the public participation procedures, the efforts to make documents available, the public hearing, and the extended written comment period provided sufficient opportunity for the public to comment on the Plan Approval application.

10. Comment: Commenter expresses concern about greenhouse gas emissions, especially methane & its leakages from the facility (Allison Petryk)

Response: While the combustion of natural gas will result in emissions of carbon dioxide, a greenhouse gas, this facility is not expected to emit significant amounts of methane into atmosphere. Methane will be combusted and thus not emitted, and it is estimated to contribute almost nothing to the facility-wide CO₂e emissions. Potential Greenhouse Gas (“GHG”) emissions were calculated by Archbald Energy Partners based upon the current recommended methodologies (i.e. appropriate up to date calculation factors for GHGs, including methane). The Department has reviewed the analysis and has determined it to be appropriate. GHG emissions will be reduced by employing good combustion practices, oxidation catalysts, firing exclusive natural gas, and energy efficiency.

11. Comment: Concern about the increased demand on natural gas exploration and development in the Marcellus formation because of the project. (Kelly Finan and Allison Petryk)

Response: Concerns expressed about overall natural gas development and any potential impacts this Facility may or may not have on that development is speculative and beyond the scope of the Department’s review of the Plan Approval application for this Facility. However, it is important to note that other aspects of natural gas production and transportation are regulated by the Department and other regulatory agencies. What level of demand this specific project will have on natural gas exploration and development is not clear, but that exploration and development is performed with regulatory oversight, including oversight from the Department’s Air Quality Program.

12. Comment: Concern about the source of natural gas and the potential for radon in Marcellus natural gas. (John Mellow)

Response: In 2013, the Department initiated a study to collect data relating to technologically enhanced naturally occurring radioactive material (“TENORM”) associated with oil and gas operations in Pennsylvania. This study included an assessment of potential worker and public radiation exposure, TENORM disposal, and other possible environmental impacts. It specifically included the evaluation of a natural gas fired power plant where ambient air radon concentration measurements were performed at the facility fence line. The results were all at or

below the minimum detection concentration values for radon. The study concluded that there is little potential for additional radon exposure to workers and the public at or from natural gas-fired power plants.

13. Comment: Commenter concerns about natural gas supplier and construction of natural gas supply pipeline for the facility. (John Mellow)

Response: The Plan Approval requires the Facility to burn only pipeline quality natural gas. Pipeline quality gas is defined in the Code of Federal Regulations at 40 C.F.R. § 72.2 as:

A naturally occurring fluid mixture of hydrocarbons (e.g., methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions, and which is provided by a supplier through a pipeline. Pipeline natural gas contains 0.5 grains or less of total sulfur per 100 standard cubic feet. Additionally, pipeline natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1100 Btu per standard cubic foot.

Review and approval of natural gas supply pipeline construction is not part of the Department's Air Quality Plan Approval application review. The commenter may wish to contact the Federal Energy Regulatory Commission to obtain further information regarding pipeline construction and applicable requirements.

14. Comment: Commenter(s) requested "site specific" background monitoring for the air and water media prior to construction and operation (John Mellow, Kelly Finan and Allison Petryk)

Response: Background air quality data was collected by Lackawanna Energy Center, LLC to be used in their air dispersion modeling analysis to show the predicted effects of pollutants from both the Archbald Energy Partners Facility and the Lackawanna Energy Center Facility. For more discussion on this analysis, the Department refers the commenters to Response No. 6 above.

Appropriate CO, NO₂, PM-2.5, and PM-10 background concentrations were used in the NAAQS dispersion modeling analysis. The CO background concentration was derived from 2012 - 2014 data measured at the Department's Scranton monitor (Site ID: 42-069-2006). The NO₂ and PM-2.5 background concentrations were derived from 2011- 2013 data measured at the Department's Scranton monitor. The PM-10 background concentration was derived from 2012 - 2014 data measured at the Department's Wilkes-Barre monitor (Site ID: 42-079-1101). The Department believes that use of Scranton and Wilkes Barre background data are representative background data for the site and that it satisfies applicable State and Federal requirements. The Department has specific sites throughout the Commonwealth that monitor ambient concentrations of criteria pollutants and that can be compared with the NAAQS. The monitoring data is available for public review at the following website: http://www.dep.state.pa.us/aq_apps/aadata/.

15. Comment: Commenter concerns about natural gas supply during extreme cold weather event for domestic users. (John Mellow)

Response: This comment does not provide a basis for rejecting the Plan Approval application or amending the Plan Approval. The Department’s Plan Approval application review was focused on plant operations and emissions from the proposed Facility. The application did not address, and was not required to address, natural gas supply during extreme cold weather events for domestic users.

16. Comment: Commenter concern about availability of Emissions Reduction Credits for Archbald Energy Partners.

Response: Archbald Energy Partners is classified as a “minor” facility and will not be required to obtain Emissions Reduction Credits.

17. Comment: Commenter stated that economic benefits will not be forthcoming for the host community. (John Mellow)

Response: The Department’s review of the Plan Approval application was focused primarily on plant operations and emissions from the proposed Facility to ensure that its operations could be conducted in accordance with applicable regulatory requirements. Economic benefits for the host community would be addressed between the host community and the Permittee and would not be part of the review of the Plan Approval application.

18. Comment: There is no phone number available for the Archbald Energy Partners, LLC facility at the address listed in the PA Bulletin notice. (John Mellow)

Response: The company name, address and phone number that is listed on General Information Form submitted with the Plan Approval application is:

Archbald Energy Partners, LLC
72 Glenmaura National Blvd.
Moosic, PA 18507
Phone No. 570-342-5200
EIN No. 47-4745794

19. Comment: Commenter asked if there are any proposal for the subsurface injection of waste gases from the Archbald Energy Partners? (John Mellow)

Response: Archbald Energy has not proposed any subsurface injection of waste gases.

20. Comment: Will any air pollutant emissions settle to the ground, eventually permeating the ground and endangering the water supply over time? (Kelly Finan)

Response: As discussed in Response No. 1 above, the National Ambient Air Quality Secondary Standards are designed to protect public welfare, including effects on soils, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility, property, and climate, as well as effects on economic values and on personal comfort and well-being. As discussed in

Response No. 6 above, air quality dispersion modeling performed by Lackawanna Energy took into consideration projected emissions from the Archbald Energy Facility and the results showed that the NAAQS would be protected. Therefore, there is no indication that air pollutant emission would settle to the ground and cause contamination of the soil and water supply over time

21. Comment: This plant will not bring a lot of local jobs in the area. (John Mellow)

Response: Evaluation of the plants impact on local employment is not a component of the Air Quality Plan Approval process. The Permittee will have more information regarding the jobs that the project will create.

FINAL DETERMINATION

Pursuant to 25 Pa. Code Chapter 127, all comments submitted during the October 26, 2016 public hearing have been reviewed, considered and are appropriately addressed in this document. It is the view of the Department that, after consideration of all comments received and revisions to the Plan Approval, the available information indicates that Archbald Energy Partners can construct an Electrical Generation Plant with associated control devices in Archbald Borough, Lackawanna County. It shall meet the emission limitations and the conditions set forth in their application and Plan Approval 35-00070A, and will comply with all applicable State and Federal air quality regulatory requirements.