111 W 19th Street, 8th Floor
New York, NY 10011

March 21, 2025

Brian K. Bailey, P.E.
Chief, Facilities Permitting Section, Air Quality Program
Pennsylvania Department of Environmental Protection
Northcentral Regional Office
208 West Third Street, Suite 101
Williamsport, PA 17701

Re: Tech Deficiency Letter: Need Additional Justification
Plan Approval 08-00060A
Wyalusing Township, Bradford County

Dear Mr. Bailey:

KDI Wyalusing Power LLC (KDI) is submitting this letter in response to the Pennsylvania Department of Environmental Protection (PADEP) Northcentral Regional Office's March 7, 2025 letter regarding the need for additional information and clarifications on Plan Approval 08-00060A for the KDI Wyalusing Energy Center (Facility). KDI is proposing to construct and operate the Facility, a natural gas power generation facility, to be located in Wyalusing Township, Bradford County, Pennsylvania.

To continue the review of Plan Approval 08-00060A application, additional information, and/or clarification with respect to the following has been provided:

1. **The application requests emission limits based upon the "worst case scenario" regarding atmospheric conditions for all air contaminants from the combustion turbines (i.e., NO_X 2.85 lb/hr). However, the potential emissions listed in the table based upon the total requested operating time seem to be based on the average atmospheric conditions of the facility's location (i.e., NO_X 2.40 lb/hr). Please explain the discrepancy.**

   For both short-term (i.e., lb/hr) and annual (i.e., tpy) emissions rates, KDI analyzed the combustion turbines (CT) operating profiles. For compliance purposes, short-term emissions rates are based on the maximum value across all CT steady-state operating conditions. For annual emissions totals, KDI selected emissions rates corresponding to the average ambient conditions of 59 degrees Fahrenheit (°F) and maximum operating load. This operating case establishes an annual potential-to-emit (PTE) that considers the variability of operations and ambient conditions throughout the year, as stated in footnote (b) of Table E-5 of the Plan Approval Application.

2. **KDI is proposing the construction of eight (8) simple cycle turbines with a total combined output of approximately 248 MW. Simple cycle turbines are much less efficient than those in combined cycle with a heat recovery steam generator. It would seem that less turbines would be required to produce 248 MW, under a combined cycle scenario and would be 10 – 20 percent more efficient. Please provide detailed justification as to why combined cycle could not be used for this project.**

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The proposed simple cycle CTs have been selected by the client in order to meet the required power demand of the planned adjacent data center. There is not sufficient electrical power from the local electric transmission grid to accommodate the power demand of the planned data center, requiring the construction and operation of a dedicated, constant, and reliable power supply. The simple cycle CTs will provide and generate reliable, constant power for the proposed data center, and do not plant to sell power to the grid.

Simple cycle CTs are more responsive, with faster startup times, compared to combined cycle CTs. Because the proposed data center requires a constant primary power supply, a redundant combined cycle unit would need to be constructed as a back-up plant in the event of a malfunction, required maintenance outage, or test program. This would significantly increase the potential emissions profile of the facility. Combined cycle CTs are suitable for large electric generating stations providing power directly to the regional electric grid.

The required power load for the planned data center can be met by six of the eight CTs for the majority of ambient conditions and load requirements. In the event of increased demand due to ambient conditions (e.g., efficiency of CT decreases during hot and humid conditions), a seventh, and, in extreme cases, an eighth CT will provide supplemental power as needed. Additionally, in the event that an upset or malfunction occurs for one of the six simple cycle CTs, a spare/backup CT would be brought online as a replacement to provide “prime power” during the maintenance time of the CT.

The Project design and configuration is best suited to the use of simple cycle CTs, employing enough units to provide constant and reliable power to the proposed data center. While there is some redundancy built into the simple cycle CT configuration, in order for a combined cycle configuration to provide the same redundancy, a second CT, heat recovery steam generator (HRSG), would need to be installed. Because there is no intent to generate or provide surplus power to the grid, this would be an unnecessary installation and modification of the Project’s intent and design. Simple cycle CTs, as designed, are best suited for this installation.

3. **The plan approval application indicates 365 startup/shut down events. It is not clear whether these 365 total events are between all the turbines for a year. Please clarify.**

   Potential emissions were conservative based on the assumption that there would be one CT startup event and one corresponding CT shutdown event 365 times per year. This estimate is inclusive of all eight proposed CTs. This allows the Facility to rotate CTs as needed, allowing for required maintenance and testing of each CT throughout the year. This also includes startup/shutdown events related to increased demand operations.

4. **KDI included emission factors for the start-up events of the turbines, however the shutdown events do not have an emission factor listed in the application. Please explain.**

   The simple cycle CTs do not have a lengthy shutdown process and will be equipped with emissions controls. Based on CT data, during the shutdown process the control devices will still be effective and operational, maintaining the necessary heat to reduce emissions for the duration of the shutdown event.

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5. **Table E-5 implies that there are 6 combustion turbines that will be ran simultaneously for 6,000 hours a year, 7 for 2,710 hours per year, and 8 for 50 hours per year. It does not indicate if these are the same combustion turbines being operated over the year timeframe, where 6 of the combustion turbines would then be operated a total of 6,760 hours, 1 additional combustion turbine for 2,710 hours, and another for 50 hours. Please confirm that you are proposing a limit of 55,370 hours per year for all 8 turbines combined.**

   Yes, KDI is proposing a cumulative limit of 55,370 hours per year for all eight CTs combined. Based on the anticipated average annual climate conditions, the Facility is expecting to run six CTs as the primary source of power for 6,000 hours per year. In the event of variable ambient conditions or demand requirements, a seventh or eighth CT may brought online to provide the required power for the data center. Table E-5 provides the number of CTs operating simultaneously and the operating time associated with the combination of CTs operating annually. Seven turbines are expected to operate simultaneously for an annual operating time of 2,170 hours and eight CTs are expected to operate for an annual operating time of 50 hours. These potential hours are in anticipation of the need for additional power in the case of critical power demand or when there is reduced efficiency of the CTs due to extreme or fluctuating weather conditions (e.g., a sustained heat wave).

Number of CTs Operating Simultaneously	Operating Time (hr/yr)
6	6,000
7	2,710
8	50
Cumulative Total	55,370

Should you have any questions about this submittal, please feel free to contact me at 703-778-0841 x123 or draggio@newfortressenergy.com.

Sincerely,
KDI Wyalusing Power LLC

Debra Raggio
Executive Vice President, Head of Regulatory

cc: Joseph L. Piktel (PADEP)
Lily Hassan (KDI)
Merritt McGlynn (ALL4 LLC)
John Slade (ALL4 LLC)