



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF AIR AND RADIATION

June 26th, 2025

Mr. Albert W. Bergeron
Alternate Designated Representative
CPV Shore, LLC
1070 Riverside Drive
Keasby, New Jersey 08832

Re: Petition to use hourly gross calorific value analysis in calculation of hourly heat input at the Woodbridge Energy Center (Facility ID (ORISPL) 57839)

Dear Mr. Bergeron:

The United States Environmental Protection Agency (EPA) has reviewed the April 1, 2025 petition submitted by CPV Shore, LLC (CPV) under 40 CFR 75.66 requesting permission to use hourly average measurements, rather than monthly averages, of the gross calorific value (GCV) of pipeline natural gas or natural gas to perform emissions calculations for units 0001 and 0002, and any future unit utilizing Appendix D to part 75, located at the Woodbridge Energy Center (WEC).¹ EPA approves the petition, with conditions, as discussed below.

Background

CPV owns and operates WEC, which is located in Middlesex County, New Jersey. WEC units 0001 and 0002 are combustion turbines with heat recovery steam generators that serve a single steam turbine in a "2-on-1" combined cycle configuration. Each of the combustion turbine electricity generators has a nameplate capacity of 222.7 MW, and the steam turbine electricity generator has a nameplate capacity of 327.5 MW, yielding a total nameplate capacity of 773 MW. The units currently combust pipeline

¹ In this response, EPA refers to the relevant units as WEC units 0001 and 0002, using the unit numbers that appear in CPV's reporting to EPA. In the petition and in its reporting to the U.S. Energy Information Administration, CPV refers to these units as WEC units CT001 and CT002, respectively.

natural gas.

According to CPV, WEC units 0001 and 0002 are subject to the Acid Rain Program and Cross-State Air Pollution Rule (CSAPR) trading programs for annual emissions of sulfur dioxide (SO₂) and annual and ozone season emissions of nitrogen oxides (NO_x). CPV is therefore required to continuously monitor and report SO₂, NO_x, and carbon dioxide (CO₂) mass emissions, NO_x emission rate, and heat input for the units in accordance with 40 CFR part 75.

Acid Rain and CSAPR-affected units that meet the definition of “gas-fired” or “oil-fired” in 40 CFR 72.2 may use the excepted methodology in appendix D to part 75 to determine SO₂ mass emissions and unit heat input instead of installing continuous emission monitoring systems (CEMS). CPV has elected to use the appendix D methodology for units 0001 and 0002.

The appendix D methodology requires continuous monitoring of the fuel flow rate and periodic sampling of the fuel characteristics, including sulfur content, GCV, and density (if needed). Under section 2.3.4.1 of appendix D, the GCV of pipeline natural gas must be determined at least once in every month in which the fuel is combusted for 48 hours or more (and at least once in each calendar quarter in which the unit operates). If multiple GCV samples are taken and analyzed in a particular month, section 2.3.4.1 provides that, “the GCV values from all samples shall be averaged arithmetically to obtain the monthly GCV.” Furthermore, section 2.3.7(c)(1) of appendix D states that, “[i]f multiple samples are taken and averaged, apply the monthly average GCV to the entire month.”

Thus, for units such as WEC units 0001 and 0002 that combust pipeline natural gas or natural gas, for each hour of unit operation in a given month, the measured hourly fuel flow rate and the average monthly GCV value are used to calculate the hourly unit heat input. The hourly heat input rate is then multiplied by a default SO₂ emission rate to calculate the hourly SO₂ mass emissions.

WEC’s fuel supplier, Williams-Transco, owns, operates, and maintains a continuous chromatograph which provides hour-by-hour measurements of the GCV of the fuel burned at the facility. CPV believes the most accurate hourly heat input rates are obtained when hourly GCV values are coupled with hourly measurements of fuel flow rate. In view of this, CPV submitted a petition to EPA requesting permission to use hourly GCV values, rather than monthly averages, in the emission calculations for units 0001 and 0002. CPV also made the request for any other unit combusting pipeline natural gas that may be constructed at WEC in the future. In addition, CPV requested that EPA’s approval continue to apply in the event that the fuel combusted at WEC in the future meets the criteria to qualify as natural gas but not as pipeline natural gas.

EPA’s Determination

EPA approves CPV’s petition to use hourly measurements of the gross calorific value of pipeline natural gas, as an option in lieu of monthly arithmetic average GCV values, in the emissions calculations for WEC units 0001 and 0002. The Agency concurs that using hourly, rather than

monthly, GCV values together with hourly fuel flow rates is likely to provide more accurate hourly heat input rate data. Furthermore, hour-by-hour measurement of the GCV far exceeds the minimum sampling frequency for pipeline natural gas (i.e., once per month) specified in section 2.3.4.1 of appendix D. EPA notes that approval of the requested authorization to use hourly GCV measurements does not preclude CPV from alternatively continuing to use monthly average GCV values in accordance with the regulations. Further, for the same reasons stated above with respect to units 0001 and 0002 and pipeline natural gas, EPA's approval also applies to any other pipeline natural gas-fired unit that may be constructed at WEC in the future, and also applies in the event that the fuel combusted at WEC in the future meets the criteria to qualify under part 75 as natural gas but not as pipeline natural gas.

Conditions of Approval

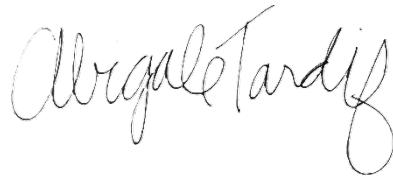
As a condition of this approval, for periods of missing GCV data, CPV shall use substitute data values in the calculations, as follows:

1. Provided that at least one valid GCV measurement is obtained in a given month, substitute, for each hour of the missing data period, the arithmetic average of the GCV values from the hour before and the hour after the missing data incident; or
2. In accordance with section 2.4.1 of appendix D to part 75, if no valid GCV values are obtained in a given month, substitute, for each hour of the missing data period, the maximum potential GCV value of 110,000 Btu per 100 standard cubic foot (scf) from table D-6 in appendix D.

Because WEC's fuel supplier operates the continuous chromatograph and has an economic incentive to ensure that the GCV measurements produced by the chromatograph are not biased low (while CPV has an analogous economic incentive to ensure that the GCV measurements are not biased high), EPA considers it reasonable to treat the chromatograph for purposes of this petition in the same manner as gas billing meters are treated under the part 75 regulations. Accordingly, in these circumstances EPA believes it is reasonable to approve CPV's petition without establishing conditions regarding the operation and maintenance of the chromatograph or related quality assurance/quality control procedures. This approval, and in particular the absence of conditions related to the chromatograph, specifically relies on CPV's representation that the chromatograph is operated by WEC's fuel supplier.

EPA's determination relies on the accuracy and completeness of the information provided by CPV in the April 1, 2025, petition and is appealable under 40 CFR part 78. If you have any questions regarding this determination, please contact Christopher Worley at worley.christopher@epa.gov or (202) 343-9531.

Sincerely,

A handwritten signature in cursive script, reading "Abigale Tardif". The signature is written in black ink and is positioned below the word "Sincerely,".

Abigale Tardif
Principal Deputy Assistant Administrator
Office of Air and Radiation

cc: Richard Ruvo, EPA Region 2
Michael Klein, New Jersey Department of Environmental Protection (DEP)