



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Washington, DC 20460

OFFICE OF AIR AND RADIATION

August 29, 2022

Mr. Mark W. Bertram
Designated Representative
Big Rivers Electric Corporation
9000 Highway 2096
Robards, Kentucky 42452

Re: Petition for waiver of the requirement to provide operating data to qualify as “gas-fired” for units G1 and G2 at the R.D. Green Generating Station (Facility ID (ORISPL) 6639)

Dear Mr. Bertram:

The United States Environmental Protection Agency (EPA) has reviewed the March 31, 2022 petition and the April 8 and May 27, 2022 supplemental letters submitted by Big Rivers Electric Corporation (Big Rivers) under 40 CFR 75.66. The petition requests a waiver for units G1 and G2 at the R.D. Green Generating Station (Green Station) regarding the requirement to submit operating data to qualify as “gas-fired” units under 40 CFR 72.2. EPA approves the petition, with conditions, as discussed below.

Background

Big Rivers owns and operates Green Station, which is located in Webster County, Kentucky. Green Station units G1 and G2 have historically operated as coal-fired boilers, and each serves an electricity generator with a nameplate capacity rating of 263.7 megawatts. According to Big Rivers, units G1 and G2 are both subject to the Acid Rain Program and Cross-State Air Pollution Rule (CSAPR) trading programs for sulfur dioxide (SO₂) and annual and ozone season nitrogen oxides (NO_x). Big Rivers 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 units G1 and G2 in accordance with 40 CFR part 75. To meet these monitoring requirements, Big Rivers has installed and certified SO₂ and CO₂ concentration continuous emission monitoring systems (CEMS), NO_x-diluent CEMS, and stack gas flow rate monitors to measure emissions from units G1 and G2.

According to Big Rivers, Green Station units G1 and G2 have been converted to combust exclusively natural gas. On January 17, 2022, the Kentucky Department for Environmental Protection (Kentucky DEP) revised Green Station’s Clean Air Act Title V operating permit to include a federally enforceable condition prohibiting combustion of fuel other than natural gas

after completion of planned gas conversion projects on units G1 and G2.¹ In subsequent letters, Big Rivers has certified to EPA that the gas conversion projects for units G1 and G2 were completed on May 19 and April 7, 2022, respectively.

Under part 75, units that meet the definition of “gas-fired” units in § 72.2 have monitoring options that are not available to coal-fired units, including the option to quantify a unit’s SO₂ mass emissions and heat input rate using the methodology in appendix D to part 75 that relies on measurements of the quantity and quality of fuel combusted as an alternative to using SO₂ and stack gas flow rate CEMS. Gas-fired units also have options that are not available to coal-fired units for quantifying CO₂ mass emissions under appendix G to part 75.

In the March 31, 2022 petition, Big Rivers requests a waiver of an otherwise applicable condition for Green Station units G1 and G2 to be considered gas-fired units for the purposes of part 75. The definition of “gas-fired” in § 72.2 includes provisions under which a unit that previously did not qualify as gas-fired can qualify as gas-fired based upon the submission of operating data for three calendar years or 720 operating hours, whichever is less, demonstrating that the unit has combusted natural gas for specified minimum percentages of its overall fuel usage and only fuel oil for its remaining fuel usage. Big Rivers requests that units G1 and G2 be considered gas-fired units for purposes of part 75 without the submission of such operating data.

EPA’s Determination

Absent the waiver requested in Big Rivers’ petition, Big Rivers would be required to submit three calendar years or 720 operating hours of operating data for Green Station units G1 and G2 following the conversions to gas-fired operation to demonstrate that the units qualify as gas-fired under § 72.2. The purpose of this data submission requirement is to provide assurance that the conversions are permanent. As described above, Big Rivers has provided information intended to demonstrate the permanence of the conversions. Specifically, the units are subject to a federally enforceable permit condition that prohibits the units from combusting fuels other than natural gas after completion of their gas conversion projects, and Big Rivers has certified that those projects were completed on May 19 and April 7, 2022 for units G1 and G2, respectively. EPA views these factors as providing sufficient assurance that the units’ conversions from coal to natural gas combustion are permanent, fulfilling the purpose of the operating data submission requirement and making that requirement unnecessary in this instance.

In view of these considerations, EPA approves Big Rivers’ petition for a waiver of the requirement to submit three calendar years or 720 hours of unit operating data to demonstrate that Green Station units G1 and G2 meet the definition of “gas-fired” under § 72.2. Unit G1 is considered gas-fired for purposes of 40 CFR part 75, the Acid Rain Program, and CSAPR as of the first hour of operation on or after May 19, 2022. Unit G2 is considered gas-fired for purposes of 40 CFR part 75, the Acid Rain Program, and CSAPR as of the first hour of operation on or after April 7, 2022. EPA notes that this approval by itself does not alter any requirement to

¹ R.D. Green Title V Operating Permit, No. V-19-020 R2 (Kentucky DEP, issued January 17, 2022), p.4; available at http://dep.gateway.ky.gov/eSearch/Search_AI_Detail.aspx?AgencyID=44411.

continue to use a CEMS that may arise under legal authority other than 40 CFR part 75, such as the facility's Title V operating permit, a state regulation, or a consent decree.

Conditions of Approval

As conditions of this approval for Green Station units G1 and G2 to be considered gas-fired units for purposes of 40 CFR part 75, the Acid Rain Program, and CSAPR without the submission of operating data that would otherwise be required, Big Rivers shall:

1. Make all necessary revisions to the electronic monitoring plans for Green Station units G1 and G2 to represent the change from coal-fired to natural gas-fired. The monitoring plan revisions may include, but are not limited to, assigning appropriate closeout dates, activation dates, and codes for monitoring systems, monitoring methodologies, emissions and heat input rate formulas, and monitoring system span and range values;
2. If Big Rivers elects to use the monitoring methodology under appendix D to part 75, ensure that the natural gas fuel flowmeters are certified according to section 2.1.5 of appendix D to part 75; and
3. If Big Rivers elects to use the monitoring methodology under appendix D to part 75, ensure that the data acquisition and handling systems are properly programmed to use the appendix D methodology for quantifying SO₂ mass emissions and heat input rate and Equation G-4 for quantifying CO₂ mass emissions.

EPA's determination relies on the accuracy and completeness of the information provided by Big Rivers in the March 31, 2022 petition and the April 8 and May 27, 2022 supplemental letters and is appealable under 40 CFR part 78. If you have any questions regarding this determination, please contact Charles Frushour at (202) 343-9847 or by e-mail at frushour.charles@epa.gov. Thank you for your continued cooperation.

Sincerely,

Rona Birnbaum, Director
Clean Air Markets Division

cc: Marion Watson, EPA Region 4
Ben Markin, Kentucky DEP
Charles Frushour, EPA CAMD