



SUBJECT: Review of Emission Reduction Credit Application
32-00055, Homer City Generating LP
Homer City Generating Station
Center Township, Indiana County

DATE: November 22, 2024

TO: File AQ/Facility/Permit/32-00055
Site: 236714 PF ID: 262713

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INTRODUCTION:

Homer City Generating LP (Homer City) has submitted an application to generate Emission Reduction Credits (ERCs) from the permanent shutdown of their Homer City Generating Station located in Center Township, Indiana County. ERCs are used to offset emission increases subject to 25 Pa. Code §127.201 Subchapter E. ERCs have been requested for NO_x, PM_{2.5}, and VOC. The application was received by the Department on March 28, 2024 via the ePermit system. The application was revised and resubmitted on August 13, 2024. The Department required Homer City submit a RACT III determination in addition to their ERC submittal. The RACT III determination was received by the Department on October 31, 2024. The ERC application included the signature of the facility's responsible official Shawn Lynch, Senior Director of Homer City Generating LP.

The site address is 1750 Power Plant Rd, Homer City, PA (15748) 40° 30' 48.8" N, 79° 11' 48.5" W. The site contact is Environmental Manager Gary Cline, who can be reached at gary.cline@nrg.com or (724) 479-6255.

Homer City has applied to use the ERCs for banking/trading/selling purposes from the permanent shutdown of the following sources:

- Source 031, Pulverized coal fired utility boiler, rated 6,792 MMBtu/hr, manufactured by Foster Wheeler, model Reheat OTU, installed 08/04/1969
 - Equipped with Selective Catalytic Reduction control device C04 (*SCR - Unit 1*)
 - Equipped with Electrostatic Precipitator control device C01 (*ESP Unit 1*)
 - Equipped with Activated Carbon Injection control device C08 (*ACI - Unit 1*)
 - Equipped with Novel Integrated Desulfurization System control device C10 (*NID - Unit 1*)

- Source 032, Pulverized coal fired utility boiler, rated 6,792 MMBtu/hr, manufactured by Foster Wheeler, model Reheat OTU, installed 04/25/1960
 - Equipped with Selective Catalytic Reduction control device C05 (SCR - Unit 2)
 - Equipped with Electrostatic Precipitator control device C02 (ESP Unit 2)
 - Equipped with Activated Carbon Injection control device C09 (ACI - Unit 2)
 - Equipped with Novel Integrated Desulfurization System C11 (NID - Unit 2)
- Source 033, Pulverized coal fired utility boiler, rated 7,260 MMBtu/hr, manufactured by Babcock and Wilcox, Model RB512, installed 12/29/1977
 - Equipped with Selective Catalytic Reduction control device C06 (SCR - Unit 3)
 - Equipped with Electrostatic Precipitator control device C03 (ESP Unit 3)
 - Equipped with Flue Gas Desulfurization control device C07 (FGD - Unit 3)

Sources 031 through 033 were last operated on August 31, 2023. Per 25 Pa. Code § 127.207(2)(i), “The owner or operator of an ERC-generating source or facility shall submit a written notice to the Department within 1 year after the deactivation of a source or facility to request preservation of the emissions in the inventory.” The notice for the above-referenced sources to request preservation of the emissions in the inventory was received on March 28, 2024, less than 1 year after deactivation of each source, and therefore these sources qualify for ERC generation.

ANALYSIS

In accordance with 25 PA Code §127.207(1), a creditable emissions decrease or ERC shall be *surplus, permanent, quantified and federally enforceable* as follows:

(i) Surplus: *A creditable emissions decrease or ERC shall be included in the current emission inventory, and may not be required by or be used to meet past or current SIP, attainment demonstration, RFP, emissions limitation or compliance plans. Emissions reductions necessary to meet NSPS, LAER, RACT, BAT, BACT, allowance-based programs and permit or plan approval emissions limitations or other emissions limitations required by the Clean Air Act or the act may not be used to generate ERCs or a creditable emissions decrease.*

- **The emission values in the application are considered surplus** because the sources were optionally shutdown. The years of 2021 and 2022 were selected by Homer City for averaging and estimating the ERCs. The 2021 and 2022 yearly emissions from the sources were reported by Homer City to the Air Information Management System (AIMS) emissions inventory. The emissions reported in AIMS are equal to or greater than the ERC values in this application. NOx emission credits are reduced by the Federal Implementation Plan (FIP) of the current operating permit to which the sources would be subject.

(ii) Permanent: *A creditable emissions decrease or ERC generated from emissions reductions which are Federally enforceable through an operating permit or a revision to the SIP and assured for the life of the corresponding increase, whether unlimited or limited in duration, are considered permanent. Emissions limitations and other restrictions imposed on a permit as a result of a creditable emissions decrease or ERC generation shall be carried over into each successive permit issued to that facility. MERCs and other ERCs generated pursuant to an approved economic incentive program shall be permanent within the time frame specified by the program.*

- **All sources at this facility are permanently shut down** and were last operated on August 31, 2023.

(iii) Quantified: *A creditable emissions decrease or ERC shall be quantified in a credible, workable and replicable method consistent with procedures promulgated by the Department and the EPA.*

- Per 25 PA Code § 127.207(4)(i)(A), in establishing the baseline used to calculate ERCs, the average actual or allowable emissions, whichever is less, shall be calculated over the two calendar years immediately preceding the emission reduction. Per 25 Pa. Code § 127.207(4)(i)(B), if the Department determines that the 2-year period immediately preceding the emission reduction is not representative of the normal emission rates or characteristics, the Department may specify a different 2-year period within the preceding 5 calendar years.

The years of 2021 and 2022 were selected by Homer City for averaging and estimating the ERCs. The 2021 and 2022 AIMS reports are based upon stack testing and Continuous Emission Monitoring System (CEMS) data. DEP agrees 2021 and 2022 data is representative of the normal emission rates from the facility. A Federal Implementation Plan (FIP) was issued by the U.S. EPA for the Homer City Station (87 Fed. Reg. 53381, August 31, 2022), as part of RACT II. The facility's newer FIP was applied to the NO_x ERC values because the sources would be subject to the new more stringent emission restrictions.

RACT III regulations apply to any owner or operator of a "major NO_x emitting facility" or a "major VOC-emitting facility," or both, as defined in § 121.1 that existed on or before August 3, 2018. Therefore, RACT III requirements apply to all sources located at facilities that emit or have a potential to emit equal to or greater than 100 tons per year (TPY) of NO_x or 50 TPY of VOCs. The Homer City facility did operate a limited number of days after the January 1, 2023 RACT III compliance deadline before total shut down on August 31, 2023.

The Department required Homer City submit a RACT III determination which was received by the Department on October 31, 2024. Homer City proposes that the RACT III emission limitations for the facility's coal-fired boilers are equivalent to emission limitations which are established under RACT II and therefore, compliance with the FIP RACT II emission limitations constitutes compliance with RACT III.

No additional coal-fired boiler control technologies have emerged on EPA's RACT BACT LAER Clearing House since Homer City completed their RACT II determination. The Department finds Homer City's RACT III determination acceptable. RACT III will not impact the FIP, SIP, or ERC values.

Any daily actual emission rate in the averaging period, which would have exceeded the current FIP NO_x emission restriction, was replaced with the maximum daily allowable NO_x emission rate of the FIP. **The ERC values were adjusted and quantified as required by §127.207** and are show in the table below.

Table 1: Baseline Emissions of ERC Sources, two year average, eligible ERC.

	Source 031			Source 032			Source 033		
Year	NO _x (tpy)	VOC (tpy)	PM 2.5 (tpy)	NO _x (tpy)	VOC (tpy)	PM 2.5 (tpy)	NO _x (tpy)	VOC (tpy)	PM 2.5 (tpy)
2021	1462.2	4.8	86.1	732.3	4.5	68.6	940.8	3.9	97.2
2022	993.6	4.0	71.8	398.3	1.2	8.9	1,076.6	4.3	107.8
Average	1,227.9	4.4	78.9	565.3	2.8	38.7	1,008.7	4.1	102.5
ERC	942.7	4.4	78.9	489.9	2.8	38.7	1,003.7	4.1	102.5

*Each source has become subject to a FIP after these years of operation. The FIP reduces the allowable NO_x emission rates. Any day's emission value, which would have exceeded the FIP's daily NO_x emission rate restriction, was replaced with the maximum allowable daily NO_x emission rate of the FIP.

(iv) Federally Enforceable: *A creditable emissions decrease or ERC shall be Federally enforceable emissions reductions, regulated by Federal or SIP emissions limitations, such as a limit on potential to emit in the permit, and be generated from a plan approval, economic incentive program or permit limitation.*

- The ERCs identified above will be included in the ERC Registry and an ERC Approval issued prior to their use. **The sources are shutdown and no longer capable of operation making enforcement of the emission reductions inherently achieved.**

Per Title 25 PA Code Section 127.206(f), ERCs generated by the curtailment or shutdown of a facility which are not included in a plan approval and used as offsets will expire for use as offsets 10 years after the date the facility ceased emitting the ERC generating emissions. The applicant has applied to use the ERCs for banking/trading/selling purposes. These ERCs will expire for use as offsets August 31, 2033 on if not used as described.

RECOMMENDATION

Approval of the requested ERCs is recommended. The facility would generate the following ERCs: **VOC 11.3 tpy; NO_x 2,436.3 tpy; PM_{2.5} 220.1 tpy**. Homer City will need to apply for an operating permit modification. The ERCs will be added to the registry after the permit modification's issuance. The following special conditions are recommended for the operating permit modification.

Special Conditions:

- a) The following sources are permanently shut down as of August 31, 2023 and prohibited from operation:
 - 1) Source 031
 - 2) Source 032
 - 3) Source 033
- b) The facility generated the following Emission Reduction Credits (ERCs): VOC 11.3 tpy; NOx 2,436.3 tpy; PM_{2.5} 220.1 tpy.
- c) ERCs generated by the curtailment or shutdown of a facility which are not included in a plan approval and used as offsets will expire for use as offsets 10 years after the date the facility ceased emitting the ERC generating emissions. The use of these ERCs in applicability determinations for netting purposes is limited to the period specified in 25 PA Code 127.203a(a)(1). [25 PA Code 127.206(f)]
- d) The expiration date of ERCs may not extend beyond the 10-year period allowed by subsection (f), if the ERCs are included in a plan approval but are not used and are subsequently reentered in the registry. [25 PA Code 127.206(g)]
- e) ERCs may not be entered into the ERC registry until the emission reduction generating the ERCs has been certified by the Department in accordance with the criteria for ERC generation and creation contained in 25 PA Code 127.207 (relating to creditable emissions decrease or ERC generation and creation). [25 PA Code 127.206(j)]
- f) ERCs may not be traded to facilities under different ownership until the emissions reduction generating the ERCs is made Federally enforceable. [25 PA Code 127.206(l)]
- g) ERCs transferred from one facility to another may not be transferred to a third party, unless the transfer of the ERCs is processed by the Department through the ERC registry system. [25 PA Code 127.206(n)]
- h) Pursuant to the provisions of 25 Pa. Code 127.207(7), if equipment has not been dismantled or removed, the owner or operator shall on an annual basis certify in writing to the Department the continuance of the shutdown.
- i) The facility and any subsequent user of these credits shall comply with the requirements of 25 PA Code 127.206, 127.207, and 127.208, regarding ERC use and transfer requirements.
- j) These ERCs may be used, traded, or sold after the approved entry of the ERCs by the Department into the Pennsylvania ERC Registry System.
- k) If the company wishes to restart any of the sources, a plan approval application shall be submitted.