



GROUP AGAINST SMOG & POLLUTION

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October 31, 2016

VIA EMAIL

Allegheny County Health Department

Air Quality Program

301 39th St., Bldg. 7

Pittsburgh, PA 15201

aqpermits@alleghenycounty.us

**Re: Comments of Group Against Smog and Pollution, Regarding RACT
Determinations for NRG Cheswick Generating Station
(Permit # 0054-I005)**

Dear Sir or Madam:

Please accept these comments regarding the Reasonably Available Control Technology determinations for NRG Cheswick Generating Station (#0054-I005), which I am submitting on behalf of the Group Against Smog and Pollution. According to the notice posted on its website, the Allegheny County Health Department is accepting comments on the Permit through October 31, 2016.

Very truly yours,

/s

John K. Baillie
Staff Attorney

**COMMENTS OF THE GROUP AGAINST SMOG AND POLLUTION REGARDING
THE RACT DETERMINATION FOR NRG CHESWICK GENERATING STATION
(#0054-I005)**

Pennsylvania is included in the Ozone Transport Region created by Section 184(a) of the Clean Air Act.¹ Consequently, stationary sources in Pennsylvania with the potential to emit at least 50 tons per year of volatile organic compounds (“VOCs”) or 100 tons per year of oxides of nitrogen (“NOx”) are subject to the Clean Air Act’s requirements for major stationary sources in areas classified as moderate nonattainment of the National Ambient Air Quality Standards (“NAAQS”) for ozone,² including the requirement that such sources implement “reasonably available control technology” (“RACT”).³

The NAAQS for ozone were revised in 2008.⁴ Allegheny County was designated as a moderate nonattainment area for the 2008 NAAQS for ozone effective July 20, 2012.⁵ EPA’s Final Rule implementing the 2008 NAAQS for ozone required states in the Ozone Transport Region to submit revisions to their State Implementation Plans to include revised RACT determinations for major sources of NOx and VOCs by July 20, 2014.⁶

The NRG Cheswick Generating Station (“Cheswick”) is an electric generating unit located in Allegheny County, Pennsylvania that is a major source of NOx and VOCs, and is thus subject to the RACT requirement for the 2008 NAAQS for ozone. Although the substance of the Allegheny County Health Department’s (“ACHD”) NOx RACT determination for Cheswick are incorporated into a draft Title V Operating Permit that was published on or about June 28, 2016, ACHD did not publish its RACT analysis and determination for Cheswick until October 3, 2016.

¹ 42 U.S.C. § 7511c(a).

² 42 U.S.C. § 7511c(a)(2) (VOCs); 42 U.S.C. § 7511a(f)(1) (NOx).

³ 42 U.S.C. § 7511a(b)(2)(C); *see* 40 C.F.R. § 51.912(a) (imposing a RACT requirement under the 2008 NAAQS for ozone).

⁴ 73 Fed. Reg. 16436 (March 27, 2008).

⁵ 77 Fed. Reg. 30160, (May 21, 2012).

⁶ *See* 40 C.F.R. §51.1116(b).

NOx RACT Determination for Main Boiler No. 1

Cheswick is permitted to burn coal and syngas in its Main Boiler No. 1. ACHD determined that NOx RACT for Cheswick's Main Boiler No. 1 is to require operation of an already-installed selective catalytic reduction system ("SCR") that will reduce permitted emissions from the main boiler from a permitted rate of 0.5548 lbs/MMBtu to a permitted rate of 0.10 lbs/MMBtu. ACHD's NOx RACT determination for Cheswick is more restrictive than the Pennsylvania Department of Environmental Protection's industry-wide NOx RACT determination for coal-fired combustion units equipped with SCR systems, which is a NOx emission limit of 0.12 lbs/MMBtu.⁷

To make its NOx RACT determination for Cheswick's Main Boiler No. 1, ACHD evaluated the technical feasibility of thirteen different NOx control options, and found that seven of those options were not technically-feasible for Main Boiler No. 1. ACHD further evaluated the effectiveness of each technically-feasible NOx control option, first in terms of the NOx reductions the option would achieve (above the amount that would be achieved if Cheswick were to operate its already-installed SCR), and also in terms of the cost in dollars per ton of NOx reductions for each option. The cost per ton of NOx reductions for the non-SCR options that ACHD evaluated ranged from \$9,300 to \$53,500; ACHD set the cost per ton of NOx reductions from operating Cheswick's already-installed SCR at zero.

ACHD's RACT analysis does not identify the upper cost limit for NOx control options, if any, that it used in its NOx RACT determination for Cheswick's Main Boiler No. 1, other relatively-recent RACT determinations have found that NOx control options with costs per ton of NOx emissions reduced in the range of \$2,500 to \$2,800 qualify as RACT.⁸ GASP is not

⁷ See 25 Pa. Code §129.96(g)(1)(viii).

⁸ See Environmental Quality Bd., Additional RACT Requirements for Major Sources of NO_x and VOCs, 46 Pa. Code 2036, 2044 (Apr. 23, 2016) (using "a NOx emission cost-effectiveness upper-bound of \$2,800 per ton of NOx controlled"); Approval of Implementation Plans of Wisconsin: Nitrogen Oxides Reasonably Available Control Technology, 75 Fed. Reg. 64155, 64157 (Oct. 19, 2010) (approving RACT determinations that used a \$2,500/ton benchmark).

aware of any determination that a NO_x control option having a cost per ton of NO_x emissions reduced as high as \$9,300 was RACT.

NO_x RACT Determination for Auxiliary Boiler No. 2

Cheswick is permitted to burn No. 2 fuel oil in its Auxiliary Boiler No. 2. ACHD evaluated twelve NO_x control options for Auxiliary Boiler No. 2, and found that nine of them were not technically-feasible. ACHD further found that the cost effectiveness of the three technically-feasible control options ranged from a low of \$21,960 per ton of NO_x emissions reduced to a high of \$66,670 per ton of NO_x emissions reduced. Consequently, ACHD found that none of the technically-feasible control options were cost effective.

ACHD determined that NO_x RACT for Cheswick's Auxiliary Boiler No. 2 is compliance with a new NO_x emission limit of 0.10 lbs/MMBtu; that limit is based on emission testing that was performed in July 2013.

VOC RACT Determination for Main Boiler No. 1

ACHD evaluated three VOC control options for Cheswick's Main Boiler No. 1, and determined that none of them were technically-feasible. Accordingly, ACHD determined that VOC RACT for Main Boiler No. 1 is continued compliance with existing requirements, and an emission rate of 0.0034 lbs/MMBtu.

ACHD's RACT Determination Did Not Evaluate All Relevant Factors

For sources in Allegheny County, RACT is "any pollution control equipment, process modifications, operating and maintenance standards, or other apparatus or techniques which may reduce emissions and which [the Allegheny County Health Department ("ACHD")] determines is available for use by the source ... in consideration of the necessity for obtaining the emission reductions, the social and economic impact of such reductions, and the availability of alternative

means of providing for the attainment and maintenance of the NAAQS.”⁹ RACT may be based on source categories or determined facility-by-facility.¹⁰

ACHD’s NO_x RACT determination for Cheswick will reduce the plant’s permitted NO_x emissions by over 5,000 tons per year from 2010 levels, and will substantially aid in NAAQS attainment and provide health benefits to downwind communities. However, although ACHD’s RACT analysis properly identified potential control options, properly eliminated control options that were not technically-feasible, and implicitly set a cost benchmark for NO_x emission reductions that is in line with other recent NO_x RACT determinations, it did not consider all of the factors purportedly required by Article XXI’s definition of “RACT.” Specifically, ACHD did not consider the necessity for obtaining emission reductions, the social impact of reductions, the economic impact of reductions on any party other than Cheswick’s operator, or other means (if any) of attaining and maintaining the 2008 NAAQS for ozone. ACHD’s RACT analysis should incorporate all of the factors in Article XXI’s definition of “RACT,” and its RACT determination for Cheswick should be revised if necessary based on that re-analysis.

⁹ Art. XXI, §2101.01.

¹⁰ *See* Approval of Implementation Plans of Wisconsin: Nitrogen Oxides Reasonably Available Control Technology, 75 Fed. Reg. 64155, 64156-7 (Oct. 19, 2010).