



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

OFFICE OF  
AIR AND RADIATION

Sandy DeJohn  
Project Manager  
Cayuga Energy, Inc.  
Two Court Street  
Binghamton, NY 13901

Dear Ms. DeJohn:

This letter represents U.S. EPA's formal determination of applicability under 40 CFR 72.6(c) of the Acid Rain regulations for Cayuga Energy, Inc.'s ("Cayuga") Carthage Energy Facility ("Carthage"), ORISPL 10620 and the South Glens Falls Energy Facility ("South Glens"), ORISPL 10618, in Carthage and South Glens, New York, respectively. This formal determination is made in response to your letter of September 13, 1999, requesting that a formal determination be made by U.S. EPA under 40 CFR 72.6(c).

Carthage

According to Cayuga, Carthage commenced commercial operation in November, 1991 and consists of a combined cycle unit with a 38 MW combustion turbine (CT), duct burners, heat recovery steam generator (HRSG), and a 22 MW steam turbine generator for a total of 60 MW nameplate capacity for the unit. Oil or gas is combusted in both the CT and duct burners. The exhaust from the CT is ducted into the HRSG, where oil or gas is combusted through duct burners to increase steam production from the HRSG, which in turn produces electricity at the steam turbine generator. Further, Cayuga states that steam from the steam turbine was sold to Fort James Corporation ("Fort James") for the production of paper products until March 1998. The steam contract with Fort James was terminated effective May 1, 1998, and the unit currently produces only electricity for sale.

Carthage is not a "cogeneration unit" since as of March 1998 the unit no longer provides steam to Fort James and therefore does not have "equipment used to produce electric energy and forms of useful thermal energy (such as heat or steam) for industrial, commercial, heating or cooling purposes,

through the sequential use of energy.” 40 CFR 72.2 (definition of “cogeneration unit”). Even if the unit still has equipment capable of producing steam for such purposes, the fact remains that the equipment is no longer used to do so and has not been since early 1998. Carthage therefore does not qualify as an unaffected unit under 40 CFR 72.6(b)(4), which applies only to cogeneration units.

According to Cayuga, Carthage was a qualifying cogeneration facility (under section 3(17)(C) of the Federal Power Act) with a “qualifying power purchase commitment” (as defined under 40 CFR 72.2) to sell steam to Fort James and electricity to Niagra Mohawk, and was therefore an unaffected unit under 40 CFR 72.6(b)(5).<sup>1</sup> However, the steam purchase agreement with Fort James was terminated effective May 1, 1998, and the power purchase agreement with Niagra Mohawk was terminated effective July 1, 1998. Cayuga now sells electricity under new short-term contracts. Because the power purchase agreement with Niagra Mohawk was terminated, Carthage clearly has no power purchase agreements that were in place prior to November 15, 1990 that would require it to sell electricity at a specified price and that would prevent pass-through of the costs of complying with the Acid Rain Program to current and future power purchasers. Therefore, Carthage has not had a “qualifying power purchase commitment,” and has not qualified as an unaffected unit under 40 CFR 72.6(b)(5) since at least July 1, 1998.

Cayuga does not claim, and U.S. EPA does not believe, that Carthage qualifies under any other provision as an unaffected unit. Further, Carthage burns fossil fuel (natural gas or low sulfur No. 2 fuel oil), and commenced commercial operation in November 1991. Carthage therefore is a “new unit” (i.e., “a fossil fuel-fired combustion device” that “commences commercial operation on or after November 15, 1990”) as defined under 40 CFR 72.2 . Because Cayuga uses Carthage to produce electricity for sale, Carthage is a “utility unit” as defined under 40 CFR 72.2. Carthage consequently has been an affected unit under 40 CFR 72.6(a)(3)(i), as well as under 40 CFR 72.6(a)(3)(v) (applying to units that no longer meet the definition of “qualifying power purchase agreement”) since at least July 1, 1998, the date on which the power purchase agreement with Niagra Mohawk was terminated.

### South Glens Falls

According to Cayuga, South Glens Falls commenced construction in June, 1990, commenced commercial operation in May, 1991 and consists of a combined cycle unit with a 38 MW combustion turbine (CT), duct burners, heat recovery steam generator (HRSG), and a 22 MW steam turbine generator for a total of 60 MW nameplate capacity for the unit. Oil or gas is combusted in both the CT and duct burners. The exhaust from the CT is ducted into the HRSG, where oil or gas is combusted through duct burners to increase steam production from the HRSG, which in turn produces electricity at

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<sup>1</sup> Cayuga has not requested a determination as to whether Carthage and South Glens Falls were unaffected units before July 1, 1998, and U.S. EPA is not addressing those matters in today’s letter.

the steam turbine generator. According to Cayuga, steam from the steam turbine is then provided to Encore Paper Company, Inc. (“Encore”) for the production of paper products.

The energy produced by South Glens Falls is used for two purposes: to produce electricity and to provide steam for the production of paper at Encore. South Glens Falls burns fossil fuel (natural gas or low sulfur No. 2 fuel oil) and is therefore a “new unit” (i.e., a “fossil-fuel fired combustion device” that “commences commercial operation on or after November 15, 1990”) under 40 CFR 72.2. The facility is a cogeneration unit since the facility “has equipment used to produce both electric energy and forms of useful thermal energy (such as heat or steam) for industrial, commercial, heating or cooling purposes, through the sequential use of energy.” 40 CFR 72.2 (definition of “cogeneration unit”). Since some of the heat or steam combusted at the unit is first used to produce electricity and is then used for the production of paper, the use of the energy is “sequential.”

According to Cayuga, South Glens Falls was a “qualifying cogeneration facility” (under section 3(17)(C) of the Federal Power Act) with a “qualifying power purchase commitment” as defined under 40 CFR 72.2 to sell steam to Encore and electricity to Niagra Mohawk, and was therefore an unaffected unit under 40 CFR 72.6(b)(5).<sup>2</sup> The steam purchase agreement with Encore remains in place. However, the power purchase agreement with Niagra Mohawk was terminated effective July 1, 1998, and Cayuga is now selling electricity under new short-term contracts. Because the power purchase agreement with Niagra Mohawk was terminated, South Glens Falls clearly has no power purchase agreements that were in place prior to November 15, 1990 that would require it to sell electricity at a specified price and that would prevent pass-through of the costs of complying with the Acid Rain Program to current and future power purchasers. Therefore, South Glens Falls has not had a “qualifying power purchase commitment,” and has not qualified as an unaffected unit under 40 CFR 72.6(b)(5), since at least July 1, 1998.

However, under 40 CFR 72.6(b)(4)(i), a cogeneration unit for which construction commenced before November 15, 1990 and that was constructed for the purpose of supplying an annual average of no more than 219,000 MWe-hours of actual electric output or no more than one-third of its potential electrical output capacity to a utility power distribution system on an annual basis is not a utility unit. Under that provision, such a unit is an unaffected unit.

Construction commenced on South Glens Falls in June, 1990. The combined cycle unit (the CT, duct burners, HRSG, and steam turbine generator) has a maximum design heat input capacity of 583 mmBtu/hr and a potential electrical output capacity (PEOC) of 56.9 MWe.<sup>3</sup> One-third of the

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<sup>2</sup> See n.1.

<sup>3</sup> PEOC for the combined cycle unit was calculated by adding the maximum design heat input capacities of the combustion turbines and the duct burners for a total of  $583 \times 10^6$  Btu/hr, dividing by 3 (reflecting the assumed efficiency of the unit), dividing by 3413 (reflecting the assumed heat rate), and

unit's PEOC is therefore 166,148 MWe-hrs.<sup>4</sup> If, for any three year calendar period, this unit provides more than 219,000 MWe-hrs of actual electrical output to a utility power distribution system for sale, then the unit is an affected unit under 40 CFR 72.6(a)(3)(i). As an affected unit, the unit will have to comply with all applicable requirements under the Acid Rain Program, including the requirements to apply for and receive an Acid Rain permit (under 40 CFR part 72), to monitor and report emissions (under 40 CFR part 75), and to hold allowances to cover sulfur dioxide emissions (under 40 CFR parts 72 and 73).

This determination relies, and is contingent, on the accuracy and completeness of the representations in your September 13, 1999 letter and is appealable under 40 CFR part 78. The applicable regulations require you to send copies of this letter to each owner or operator of Carthage and South Glens Falls (40 CFR 72.6(c)(1)). If you have further questions regarding the Acid Rain Program, please contact Robert Miller of EPA's Clean Air Markets Division at (202) 233-9077.

Sincerely,

/s/ (July 5, 2000)

Brian J. McLean, Director  
Clean Air Markets Division

cc: Reggie Parker, New York State DEP  
Gerry DeGaetano, U.S. EPA Region 2

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dividing by 1000 (converting to MWe). See 40 CFR 72 Appendix D.

<sup>4</sup> This figure is calculated by multiplying the PEOC by 8760, the number of hours in a year, and then dividing by 3. See 40 CFR 72.6(b)(4)(ii).