



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF  
AIR AND RADIATION

Mr. Max Greig  
Plant Manager  
Indeck-Pepperell Power Associates, Inc.  
29 Mill Street  
Pepperell, MA 01463

Dear Mr. Greig,

This letter represents U. S. EPA's official determination of applicability under §72.6(c) of the Acid Rain regulations for Unit CC1 at the Indeck-Pepperell Power Plant ("Pepperell"), ORISPL 010522, in Massachusetts, which is owned by Indeck-Pepperell Power Associates, Inc. (Indeck). This determination is made in response to Indeck's February 20, 2001 request for a determination. In its February 20, 2001 letter, Indeck also requests that, if the unit is subject to the Acid Rain Program, the deadline for compliance for the unit be extended from January 1, 2000 to June 1, 2001 to provide additional time for upgrading of the unit's monitoring system. Additionally, Indeck requests guidance in using its nitrogen oxide (NOx) monitoring system certified under the Ozone Transport Commission NOx Budget Program for monitoring NOx under the Acid Rain Program.

Background

Pepperell Unit CC1 commenced commercial operation in April 1990 and includes a 42 MWe combined cycle combustion turbine, duct burners, heat recovery steam generator (HRSG), and a 35 MWe steam turbine, for a total of 77 MWe nameplate capacity for the unit. The combustion turbine is capable of combusting natural gas and fuel oil while the duct burners are capable of combusting only natural gas.<sup>1</sup> Through a system of valves and piping, steam can be extracted from the steam turbine and transported for use in another facility. At commencement of operation, the unit had a power purchase agreement to sell electricity to Commonwealth Electric and a steam purchase agreement to sell steam to Merrimack Paper - Pepperell Paper Company (Pepperell Paper) for the production of paper products. The unit produced and sold electricity and steam under these agreements. On April 11, 1995, the agreements were bought out by Commonwealth Electric and Pepperell Paper. Indeck purchased the unit in September 1995 and began to sell electricity on the open market through short term contract. In December 1996, Indeck entered into a new steam purchase contract with Pepperell Paper and recommenced selling steam.

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<sup>1</sup>Since Indeck assumed ownership of Pepperell Unit CC1 in 1995, the duct burners have not been fired.

Since commencing operation in 1990, the unit has used energy sequentially in that some of the energy used to generate electricity was also used to produce steam for processing. The unit therefore qualified as a “cogeneration facility” under §72.2, i.e., a unit that has “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 sequential use of energy” (40 CFR 72.2 (definition of cogeneration unit)).<sup>2</sup>

Sections 402(17)(A) and 405(g)(6)(A) of the Clean Air Act include provisions discussing in detail the conditions under which a cogeneration unit is exempt from the Acid Rain Program. See, e.g., 42 U.S.C. 7651a(17)(A) (stating that a cogeneration unit is not a utility unit if it meets certain requirements concerning the purpose of its construction and the amount of electricity that it sells) and 42 U.S.C. 7651d(g)(6)(A) (stating that Clean Air Act title IV does not apply to qualifying cogeneration facility that meets certain conditions as of November 15, 1990, the date of enactment of title IV). EPA interprets these provisions, and §§72.2 and 72.6 of the regulations implementing the provisions, to provide that a cogeneration unit used to produce electricity for sale is a utility unit and thus subject to the Acid Rain Program, unless the unit meets the requirements for an exemption as set forth in §72.6(b).

#### Applicability of the Acid Rain Program to Pepperell

Indeck states that Pepperell Unit CC1 was initially exempt from the Acid Rain Program under §72.6(b)(5), which applies to a qualifying facility with a qualifying power purchase commitment. According to Indeck, the unit was a qualifying cogeneration facility (under section 3(17)(C) of the Federal Power Act) with a “qualifying power purchase commitment” (as defined under §72.2) to sell electricity to Commonwealth Electric and steam to Pepperell Paper, and therefore was an unaffected unit. However, according to Indeck, the unit lost its qualifying facility status on April 11, 1995, when the power purchase agreement with Commonwealth Electric and the steam purchase agreement with Pepperell were terminated. The unit continued to sell electricity, but to other purchasers in the market, and did not sell steam again until December 1996. EPA finds that the unit has not had a “qualifying

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<sup>2</sup> The lack of a steam purchase agreement during April 1995- December 1996 does not affect the unit’s cogeneration unit status. In a prior decision concerning Cayuga Energy, Inc.’s Carthage Energy Facility and South Glens Energy Facility, issued on July 2, 2000, EPA stated that a unit that was constructed to cogenerate and that later stopped producing process steam and produced only electricity no longer qualified as a cogeneration unit. EPA has reconsidered and now rejects that approach to applying the definition of “cogeneration facility” in §72.2. That definition (quoted above) focuses on the presence of equipment necessary to cogenerate, and Pepperell Unit CC1 has had such equipment (i.e., a system of valves and piping) since the commencement of operation, and has cogenerated. Further, EPA maintains that in general a unit’s status under the applicability criteria for the Acid Rain Program should not be based on a factor (here, whether the unit is, at a particular time, selling process steam) that can be altered prospectively by a unit’s owners and operators. If the owners and operators could change the status of a unit by stopping or later restarting the unit’s process steam sales, this would make it much more difficult to determine whether the unit was covered by the program during a given control period and therefore could significantly interfere with administration of the program.

power purchase commitment,” and has not qualified as an unaffected unit under §72.6(b)(5), since at least April 11, 1995.<sup>3</sup>

Furthermore, the unit does not meet the requirements for an exemption under §72.4(b)(4). Under that provision, the exemption is available to a cogeneration unit that commenced construction on or before November 15, 1990 and that was constructed for the purpose of providing electricity for sale on an annual basis in an amount not exceeding one-third of its potential electrical output capacity (PEOC) or more than 219,000 MWe-hours. If the purpose of construction is not known, EPA will presume that actual operation during 1985-1987 is consistent with such purpose. In addition to this initial sales criterion, a unit then must not have sales exceeding this threshold on a rolling three-year average basis.

As discussed above, Unit CC1 is a cogeneration unit that commenced construction before November 15, 1990. The unit’s PEOC is 38.09 MWe<sup>4</sup>, and one-third of the unit’s PEOC is 111,223 MWe-hours.<sup>5</sup> Indeck did not provide any information on the purpose of construction of the unit, and operations during 1985-1987 are not relevant in determining that purpose since 1990 was the unit’s first year of operation. During 1990, the unit had electricity sales of 214,145 MWe-hours, below the 219,000 MWe-hours threshold. Even assuming, for the sake of argument, that this is sufficient to show the purpose of the unit’s construction and that the unit thereby met the initial sales criterion for an

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<sup>3</sup> This finding is not changed by the fact that from December 1996 to the present, Unit CC1 has had a steam purchase agreement. This is a new steam purchase agreement, not the one that was in place on November 15, 1990. Further, the unit has not had an electric power purchase agreement since April 1995. An electric power purchase obligation is central to the concept of a “qualifying power purchase commitment” and without the former, a unit does not have the latter. In particular, a “power purchase commitment” is defined as a “commitment or obligation of a utility to purchase electric power from a facility under certain types of arrangements. 40 CFR 72.2 (definition of “power purchase commitment”). Further, any change in the terms or conditions of a power purchase commitment that “allow the costs of compliance with the Acid Rain Program to be shifted to the purchaser” means that there no longer is a “qualifying power purchase commitment.” 40 CFR 72.2 (definition of “qualifying power purchase commitment”). If the obligation to purchase electricity is eliminated and electricity sales are at market prices, all the terms and conditions associated with electric sales (including sales price) are removed. In that case, it is difficult to see how there can be a basis for concluding that costs cannot be shifted to a new purchaser of electricity, which is the basis for the exemption under §72.6(b)(5). See March 22, 1990 Congressional Record at S3027-28 (statement by Senator Wirth that “[g]randfathering these units is fair” because they are “under contract or have accepted price bids” and so cannot “pass on extra costs of allowances the way a regulated utility can.”).

<sup>4</sup> The PEOC equals the unit’s maximum design heat input capacity of  $390 \times 10^6$  Btu/hr times 1/3 (reflecting the assumed efficiency rate for the unit), divided by 3413 (reflecting the assumed heat rate), and divided by 1000 (converting to MWe). See 40 CFR part 72, appendix D.

<sup>5</sup>This figure is calculated by multiplying the PEOC by 8760 (the number of hours in a year) and then multiplying again by 1/3.

exemption under §72.4(b)(4)<sup>6</sup>, the unit's sales in 1991 (269,771 MWe-hours) and 1992 (275,985 MWe-hours), and the unit's three-year rolling average sales in 1992 (253,301 MWe-hours), exceeded the 219,000 MWe-hours threshold. The unit, therefore, failed at least by the end of 1992 to meet the sales criteria for an exemption under §72.6(b)(4).

EPA notes that the unit continued to have annual electricity sales in excess of 219,000 MWe-hours until 1994 and that, since 1995, the unit's annual sales, and three-year rolling average sales, have been less than the 219,000 MWe-hours threshold. Indeck asserts that the unit's operations have changed since the unit's loss of qualifying-facility status and Indeck's purchase of the unit in 1995. Indeck claims that sales data prior to those events should not be considered in determining whether the unit is exempt under §72.6(b)(4).

EPA rejects that claim. Section 402(17)(C) of the Clean Air Act, which is the statutory basis for that exemption under §72.6(b)(4), states that a cogeneration unit is not an affected utility unit "unless the unit is constructed for the purpose of supplying, or commences construction after [November 15, 1990] and supplies, more than" the threshold amount of electricity. 42 U.S.C. 7651a(17)(C). Consequently, once a unit (such as Pepperell Unit CC1) supplies more than the threshold amount of electricity (which is determined on a three-year rolling average basis under §72.6(b)(4) for a unit meeting the initial sales criterion), that unit becomes an affected unit under title IV of the Clean Air Act. Moreover, section 402(17)(C) does not state that a unit that supplies more than the threshold amount in one year can subsequently regain its exempt status by supplying an amount of electricity equal to or less than the threshold. Consistent with section 402(17)(C), EPA interprets §72.6(b)(4) as providing that Pepperell Unit CC1 lost the exemption under that section at least by the end of 1992, regardless of its level of subsequent electricity sales.

EPA maintains that this approach is reasonable, in addition to being consistent with the statute. Under the approach that once units become affected units, the units remain affected units, owners and operators cannot move their units at will in and out of an exemption and thus in and out of the Acid Rain Program. As discussed above in connection with the definition of "cogeneration facility," to the extent owners and operators would have the ability to change prospectively the status of a unit under the applicability criteria of the Acid Rain Program, this would make administration of the program much more difficult. For all of the above reasons, EPA concludes that the unit is not exempt under §72.6(b)(4), or under §72.6(b)(5), and is an affected unit under the Acid Rain Program.

Pepperell Unit CC1 combusts fossil fuels (natural gas and oil). As discussed above, the unit has been an affected unit under the Acid Rain Program since at least since April 11, 1995, the latest date by which neither the exemption under §72.6(b)(4) nor the exemption under §72.6(b)(5) could apply to the unit. As an affected unit, Pepperell Unit CC1 must comply with all applicable requirements under the

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<sup>6</sup>In guidance entitled "Do the Acid Rain SO<sub>2</sub> Regulations Apply to You?", dated February 1994, EPA suggested (at 12) that, when a unit that commenced construction on or before November 15, 1990 began operation after 1985, the first three years of operation will be used to determine the purpose of the unit's construction. Using that approach, Pepperell Unit CC1 never qualified for the §72.6(b)(4) exemption since its sales in 1991 and 1992 both exceeded the initial sales threshold.

Acid Rain Program, including the requirements to apply for and receive an Acid Rain Permit (under 40 CFR part 72), to monitor and report sulfur dioxide, NO<sub>x</sub>, and carbon dioxide emissions and heat input (under 40 CFR part 75), and to hold allowances to cover sulfur dioxide emissions (under 40 CFR part 72 and 73).

#### Extension of Deadline for Compliance With Acid Rain Program

Indeck also requests that EPA extend the “applicability date” for Pepperell Unit CC1 be extended from January 1, 2000 to June 1, 2001 in order to allow time “to upgrade both the software and hardware portions” of the unit’s emission monitoring system. Indeck’s February 20, 2001 letter at 2. In its request, Indeck is apparently referring to the January 1, 2000 deadline for compliance with the requirement under the Acid Rain Program to hold allowances at least equal to the unit’s sulfur dioxide emissions. As noted above, the unit is an affected unit subject to a number of Acid Rain Program requirements, which may have different deadlines for compliance. For example, the unit was required to have certified monitoring systems under Part 75 within 90 days of the date the unit became an affected unit. See 40 CFR 72.6(a)(v) and 75.4(c)(2). The unit was an affected unit at least since April 15, 1995. Further, the unit was required to meet the allowance-holding requirement starting January 1, 2000. See 40 CFR 72.9(c)(3)(iv).

Indeck does not cite any provision of the Acid Rain Program regulations under which the company may request, or under which EPA is authorized to grant, an extension of the allowance-holding requirement. EPA maintains that the Agency does not have any such authority. Moreover, even if EPA had such extension authority, Indeck provided no basis for such an extension since the unit has been required to monitor its sulfur dioxide emissions since at least July 14, 1995 (i.e., 90 days after April 15, 1995).

Finally, Indeck states that it has a NO<sub>x</sub> monitoring system certified under the Ozone Transport Commission NO<sub>x</sub> Budget Program. Indeck requests guidance from EPA concerning the use of that monitoring system for monitoring NO<sub>x</sub> under the Acid Rain Program and seeks to meet with EPA staff to discuss “implementation strategy and timing.” Indeck’s February 20, 2001 letter at 2. EPA staff is available to provide guidance and to discuss any monitoring and other issues concerning Acid Rain Program requirements. For questions concerning monitoring issues, please contact Theresa Alexander of EPA’s Clean Air Market Division at (202) 564-9747.

EPA’s determinations in this letter rely on the accuracy and completeness of the information provided by Indeck in submissions dated February 20 and June 26, 2001, and are appealable under Part 78. The applicable regulations (§72.6(c)(1)) require you to send copies of this letter to each owner and operator of Pepperell Unit CC1. If you have any further questions

concerning this letter or general question concerning the Acid Rain Program, please contact Martin Husk of EPA's Clean Air Markets Division at (202) 564-9165.

Sincerely,

Brian J. McLean, Director  
Clean Air Markets Division

cc: Ian Cohen, USEPA Region 1  
Karen Regis, Massachusetts DEP  
Gary Roscoe, Massachusetts DEP  
Theresa Alexander, USEPA