



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

OCT 23 2009

OFFICE OF
AIR AND RADIATION

William Wade Bennett
General Manager
CMS Generation
201 Executive Parkway
New Bern, NC 28562

Dear Mr. Bennett:

This letter is the U.S. Environmental Protection Agency's determination of applicability under § 72.6(c) of the Acid Rain regulations for CMS Generation's (CMS) Craven County Wood Energy, L.P. facility (Craven County), plant code (ORISPL) 10525, in Craven County, North Carolina. This determination is made in response to CMS's letter of October 10, 2005 requesting an applicability determination under § 72.6(c) and supplemental information provided by CMS on November 6, 2006, September 4 and 17 and October 3, 2008, and February 2 and 9, May 12, August 31, and September 23, 2009. EPA has determined that, as of January 1, 2006, Craven County is subject under § 72.6(a)(3)(v) to the Acid Rain Program in title IV of the Clean Air Act.

Background

Craven County consists of a single boiler (Unit ES5A) that commenced commercial operation on October 16, 1990. Wood is used as the primary fuel for Unit ES5A, and propane is used for startup purposes. October 10, 2005 petition at 1. Unit ES5A produces steam used only for the production of electricity for sale and serves a steam turbine generator with nameplate capacity of 50 MWe. The unit is used only to produce electricity and so is not a cogeneration unit as defined under § 72.2.

According to CMS, Craven County is, and has been since commencing commercial operation, a qualifying small power production facility (under section 3(17)(C) of the Federal Power Act)¹ and is an unaffected unit under the Acid Rain Program, and so is not subject to the

¹ See John Hancock Life Insurance, 105 FERC ¶62,092 (Nov. 13, 2003) and Decker Energy International, 110 FERC ¶62,289 (Mar. 21, 2003) (stating that Craven County is a qualifying facility). On January 25, 2006, CMS filed a Notice of Self-Recertification with the Federal Energy Regulatory Commission for Craven County as a qualifying small power production facility.

program requirements. The electricity produced by Unit ES5A and its generator was sold to the Carolina Power and Light Company (CP&L) under a power purchase agreement that was initially effective on December 21, 1983 (the CP&L agreement) but was revised on August 5, 1987, June 14, 1989, and January 28, 1991 and expired on December 31, 2005. Craven County began selling electricity from Unit ES5A under new, short-term (one-year) contracts via PJM Interconnection (PJM) on January 1, 2006.

A. EPA's Determination

The Acid Rain Program generally applies to any unit that is a "utility unit", which is defined as "unit" (i.e., a "fossil fuel-fired combustion device" (§ 72.2 (definition of "unit")) that is "owned or operated by a utility" (i.e., "any person who sells electricity" (§ 72.2 (definition of "utility"))) and that "serves a generator...that produces electricity for sale." § 72.6(a)(3). For a unit commencing commercial operation before November 15, 1990, the generator served by the unit must have a nameplate capacity greater than 25 MWe. See § 72.2(b)(2).

Unit ES5A is a combustion device (i.e., boiler) serving a generator of the requisite size producing electricity for sale. Moreover, the unit combusts mostly wood but burns propane for start-up. Consequently, Unit ES5A meets the general applicability criteria for the Acid Rain Program and is a unit subject to the requirements of the program (i.e., an "affected unit") unless the criteria for an exemption from the program are met.

However, CMS asserted that it intends to discontinue using propane at the unit in the future and to combust only wood. According to CMS, the unit would no longer be fossil fuel-fired and thus would not be an affected unit, regardless of whether the unit qualified for an exemption. CMS argued that the intent of the Acid Rain Program regulations was to cover "coal and gas fired facilities that burn these types of fuel continually for the production of electricity", not to cover its type of facility. October 10, 2005 request at 1.

EPA rejects CMS's claim that, if the company's intent to convert Unit ES5A to burning exclusively wood were carried out, the unit would no longer be "fossil fuel-fired." See § 72.2 (definition of "unit"). The Acid Rain Program regulations define "fossil fuel" as "natural gas, petroleum, coal, or any form of solid, liquid, or gaseous fuel derived from such material" (§ 72.2 (definition of "fossil fuel")) and "fossil fuel-fired" as:

the combustion of fossil fuel or any derivative of fossil fuel, alone or in combination with any other fuel, independent of the percentage of fossil fuel consumed in any calendar year (expressed in mmBtu). § 72.2 (definition of "fossil fuel-fired" (emphasis added)).

Since commencing operation in 1990, the unit has been burning some propane, which is a gas that is derived from oil or natural gas and so clearly is a "fossil fuel." Although, according to CMS, the amount burned in 2004 was 0.011% of total heat input, the "fossil fuel-fired" definition imposes no minimum amount of fossil fuel combustion; any amount greater than 0% makes the unit fossil fuel-fired. Moreover, if the unit were to stop burning all propane in the

future, that would not change the fact that the unit has burned fossil fuel in the past. In short, “independent” of whether the percentage of fossil fuel burned were to decline to 0% in a future calendar year, there would still remain a period when the unit burned a combination of fossil fuel and wood and that would continue to make the unit qualify as fossil fuel-fired. Id.

As discussed below, this interpretation of the “fossil fuel-fired” definition is consistent with the nature of the Acid Rain Program, as well as with EPA’s approach in applying of the Acid Rain Program’s applicability provisions. The Acid Rain Program provides unusual flexibility for affected sources to comply with the central requirement of the Acid Rain Program (i.e., the emission limitation requirement to hold allowances covering emissions). As EPA has explained:

The centerpiece of the Acid Rain Program is a unique trading system in which allowances (each authorizing the emission of up to one ton of SO₂) are bought and sold at prices determined in a free market...Utility units are required to limit SO₂ emissions to the number of allowances they hold, but since allowances are fully transferrable, utilities may meet their emissions control requirements in the most cost-effective manner. For instance, a utility may decide to (1) Switch to a lower sulfur fuel, (2) install flue gas desulfurization equipment...and bank unused allowances or sell them to other utilities or individuals, (3) forego emission reductions and buy additional allowances..., or (4) implement energy efficient measures at the plant or by encouraging customers to undertake them. Other options and combinations are possible, providing an unusually high degree of flexibility for affected sources to comply with the law. 58 Fed. Reg. 15634, 15635 (Mar. 23, 1993).

Moreover, compliance by covered sources with the emission limitation requirement -- coupled with the limitation (i.e., the annual 8.95 million ton cap) on the total amount of allowances available for use in compliance -- results in achievement of the statutory purposes of the Acid Rain Program, including the reduction of “the adverse effects of acid deposition through reductions in annual emission of sulfur dioxide of ten million tons from 1980 emission levels.” 42 U.S.C. 7651(b). It would be anomalous to interpret the applicability provisions of the Acid Rain Program regulations to transform an alternative method (e.g., switching from fossil fuel) of complying with the program into a method of entirely avoiding the requirements of the program and converting emissions covered by the annual 8.95 million ton cap into emissions outside of, and therefore not limited by, that cap.² Consistent with the statutory purposes of, and

² CMS also argued that the Acid Rain Program was “never intended for facilities such as ours that burn a non-fossil, renewable resource that is not a significant contributor to acid rain, but was intended for coal and gas fired facilities that burn these types of fuel continually for the production of electricity.” October 10, 2005 petition at 1. However, the wood burned in Unit ES5A apparently contains sufficient sulfur to result in SO₂ emissions significantly higher than those of units burning primarily natural gas. For example, in 2006, 2007, and 2008 the Acid Rain Program covered about 2,200 gas fired units with average annual SO₂ emissions of 3.1, 4.5, and 2.3 tons respectively while Unit ES5A had SO₂ annual emissions of 117.9, 133.6 and 77.1 tons during those years. In short, contrary to CMS’s assertion, the level of Unit ES5A’s

compliance flexibility provided by, the Acid Rain Program, EPA has implemented the applicability provisions in CAA title IV and the Acid Rain Program regulations by applying the policy that “once a unit is determined to be affected, that unit will remain affected until it is retired” (except in the case of units that voluntarily enter the program as opt-in units under 40 CFR part 74). 57 Fed. Reg. 29940, 29941 (July 7, 1992).

In summary, a unit, such as Craven County Unit ES5A, that is combusting fossil fuel and meets the other requirements for being an affected unit and thus subject to the Acid Rain Program requirements would not become an unaffected unit and no longer subject to these requirements simply by switching entirely to non-fossil fuel. Specifically, having burned propane, Unit ES5A will continue to be a fossil fuel-fired unit even if it were to stop using propane in the future.

B. Qualifying Facility Exemption

The Acid Rain Program regulations provide that certain units that meet the general applicability criteria discussed above are exempt from the program. For example, under § 72.6(b)(5), a qualifying cogeneration or small power production facility that would otherwise be an affected unit, but that meets certain requirements, is exempt from the Acid Rain Program. The facility must have, as of November 15, 1990, a power purchase commitment to sell at least 15% of total planned net output capacity of the facility and must have installed capacity not greater than 130% of total planned net output capacity. In addition, except for certain types of changes to the power purchase commitment, the facility continues to be exempt even if the power purchase commitment is changed after November 15, 1990. In particular, the identity of the electricity purchaser, or of the steam purchaser and the facility location, must remain unchanged as of the commencement of commercial operation, and the changes must not provide an opportunity to pass through the costs of complying with the Acid Rain Program to the electricity purchaser. See §§ 72.2 (definitions of “power purchase commitment” and “qualifying power purchase commitment”) and 72.6(b)(5); and Central Power & Lime at 5-11 (July 15, 2008) (holding that both the requirement to be a qualifying facility and to have a qualifying power purchase commitment must be met on an ongoing basis in order for a facility to remain exempt under § 72.6(b)(5)).

In the CP&L agreement (at 1), CP&L agreed to purchase “a maximum generation capacity” of 45 MWe of generation capacity and “an estimated annual energy production” of 335,000 MWh of electricity from a facility to be constructed by Carolina Cogeneration Company, Inc. in Aurora, North Carolina. CP&L was to make capacity and energy payments in accordance with CP&L’s Schedule No. CSP-6C³, through January 1, 2001 with automatic, successive one-year extensions unless terminated by either party.

emissions does not distinguish the unit from other units that are clearly covered by the Acid Rain Program.

³ Schedule No. CSP-6C is a utility rate schedule that set forth the capacity and energy payments approved by the North Carolina Utilities Commission to qualifying facilities.

On August 5, 1987, the CP&L agreement was revised (this revised agreement being referred to herein as the "August 5, 1987 amended agreement") to increase the capacity and electricity purchased by CP&L from the facility (which was now to be constructed near New Bern, North Carolina) to 79 MWe and 588,000 MWh. With regard to purchased capacity up to 45 MWe, capacity and energy payments under Schedule No. CSP-6C continued to apply with certain reductions (3.87% during summer peak and 3.37% during non-summer peak for capacity and 3.53% during peak and 2.62% during off-peak for energy) to take account of transmission and transformation losses associated with supplying power to CP&L's distribution system. For capacity greater than 45 MWe and not exceeding 79 MWe, CP&L was to pay the CSP variable rate approved by the North Carolina Utilities Commission less the transmission loss component. August 5, 1987 amended agreement at 2. The term of this agreement was 15 years, which as to "run concurrent with the term" of the CP&L agreement. Id. at 4.

Thereafter, on June 14, 1989, the CP&L agreement was further revised (this revised agreement being referred to herein as the June 14, 1989 amended agreement) to require CP&L to purchase electricity from a qualifying small power production facility to be constructed by Craven County Wood Energy Limited Partnership near New Bern, North Carolina. The capacity and electricity purchased by CP&L were restated as "a maximum generation capacity" of 45 MWe and "an estimated annual energy production of" 335,000 MWhr, with the seller agreeing to use "best effort" to limit the delivered power to 45 MWe and CP&L not being "obligated to pay for any generation in excess of" that level. June 14, 1989 amended agreement at 2. Further, capacity and energy payments were set forth in the Craven County Wood Energy Schedule No.1. Under this new rate schedule, capacity and energy payments for 1990 through 2000 were fixed for 1990 through 2000⁴ and for 2001 through 2005 were adjusted by applying the GNP Implicit Price Deflator. The agreement was to expire on December 31, 2005, with automatic one-year extensions unless terminated by either party.

As the agreement in effect on November 15, 1990, the June 14, 1989 amended agreement constitutes Craven County's power purchase commitment for purposes of applying the exemption for qualifying facilities and must meet the requirements in §§ 72.2 and 72.6(b)(5) in order for Unit ES5A to qualify initially, and to continue to qualify for, the exemption. The first requirement is that the power purchase commitment must cover at least 15% of the facility's total net planned output capacity. Under the June 14, 1989 amended agreement, CP&L was required to purchase 45 MWe of electricity produced by Unit ES5A and its associated generator. While not expressly identifying the total planned net output for Unit ES5A, the agreement (at 2) required the seller to use "best effort to limit the power delivered to [CP&L] to" 45 MWe, and, according to CMS, Craven County's only interconnection with the grid is the line connecting the facility with CP&L. Under these circumstances, it seems reasonable to consider 45 MWe as the total planned net output capacity, of which 100% was covered by the June 14, 1989 agreement. This satisfies the requirement in § 72.6(b)(5)(i).

⁴ For 1990 through 2000, the summer capacity on-peak payment was \$0.0349/KWh, the non-summer capacity on-peak payment was \$0.0303/KWh, the energy on-peak payment was \$0.0741/ KWh, and the energy off-peak payment was \$0.0437. June 14, 1989 amended agreement at 2.

The second requirement is that the qualifying facility must have a total installed net output capacity not exceeding 130% of total planned net output capacity. While Unit ES5A serves a generator with a nameplate capacity of 50 MW, the information provided by CMS does not indicate what is Unit ES5A's total installed net output capacity, which would reflect subtraction of parasitic load (such as the electricity used by any pollution control equipment) from total installed gross output capacity. However, Unit ES5A's generator nameplate (50 MWe) equals about 111% of the total planned net output capacity figure, and reducing the 50 MWe figure to take account of any parasitic load would only reduce the percentage of installed to planned net output capacity further below the 130% threshold. This satisfies the requirement in § 72.6(b)(5)(ii).

The third requirement is that, under any changes to the July 14, 1989 amended agreement, the identity of the electricity purchaser, or of the steam purchaser and the facility location, must remain unchanged as of the commencement of commercial operation and an opportunity to pass through the costs of complying with the Acid Rain Program to the electricity purchaser must not be provided. On January 28, 1991, after Craven County had been operating and producing electricity for sale for about 3 months, the July 14, 1989 amended agreement was revised (this revised agreement being referred to herein as the January 28, 1991 amended agreement) to require CP&L to purchase "generation capacity of at least" 45 MWe and "an estimated annual energy production" of 335,000 MWh. January 28, 1991 amended agreement at 1. Further, in contrast with the July 14, 1989 amended agreement under which CP&L would take but not pay for power in excess of 45 MWe, the January 28, 1991 amended agreement required CP&L to purchase and pay for all such power, which was referred to as "Incremental Power". Id. at 2. If CP&L requested the Incremental Power, the North Carolina Utilities Commission approved CSP variable energy on-peak rate (less the transmission loss component) applied to that power. If CP&L did not request the Incremental Power, a rate of \$15 per MWh applied. The expiration date of the July 14, 1989 amended agreement was not changed and so continued, under the January 28, 1991 amended agreement, to be December 31, 2005, with automatic one-year extensions unless terminated by either party. On June 8, 2005, CP&L terminated the January 28, 1991 amended agreement, effective as of December 31, 2005.

The changes made in the January 28, 1991 amended agreement did not change the identity of the electricity purchaser, which has remained CP&L. Further, while this latest amended agreement changed the price provisions to provide for compensation for electricity supplied in excess of 45 MWe, EPA finds, for the reasons discussed below, that this change did not provide an opportunity to pass through to CP&L the costs of compliance with the Acid Rain Program. According to CMS, the heterogeneous nature of the wood burned, and thus of the heat input provided, at Unit ES5A made it more difficult to maintain a constant level of steam output, and thus of electrical output, than at a unit burning only homogeneous fuels like oil or natural gas. CMS stated that, as a result, in trying to provide the amount of generation required under the July 14, 1989 amended agreement, Craven County sometimes unintentionally generated, and delivered to CP&L, more than 45 MWe of electricity. August 31, 2009 e-mail from Sheryllyn Burnett Young at 1. While the July 14, 1989 amended agreement provided no compensation for such excess generation, the January 28, 1991 amended agreement required CP&L to pay either a charge reflecting only variable costs (e.g., fuel acquisition and handling costs) or a fixed charge,

depending on whether CP&L requested the excess generation. According to CMS, this change did not result in Craven County producing more power in excess of 45 MWe. On the contrary, CMS stated that, because the increased compensation did not cover Craven County's incremental costs of producing such excess power, the facility changed its operations in order to minimize such production. February 2, 2009 e-mail from Sherilyn Burnett Young at 1.

EPA reviewed data provided by CMS for the period 1995-2005⁵ documenting revenues and costs for generation exceeding 45 MW. The data show that, despite the additional revenues provided under the January 28, 1991 amended agreement for generation exceeding 45 MWe, Craven County still produced such generation at a net loss. In particular, during 1995-2005, electricity sold to CP&L above the 45 MW threshold was generated through the combustion at Unit ES5A of additional fuel costing a total of \$266,247 and provided Craven County additional gross revenues totaling \$212,700 under the price provision changes in the January 28, 1991, resulting in a net loss of \$53,547.⁶ In summary, the January 28, 1991 amended agreement only increased the price for generation exceeding 45 MWe and merely reduced the net loss realized by Craven County, and did not result in increased net revenues, for such generation. EPA consequently finds that: the price change in the January 28, 1991 amended agreement did not allow for pass-through of the costs of compliance with the Acid Rain Program to CP&L; and Craven County had a qualifying power purchase commitment through December 31, 2005, when the January 28, 1991 amended agreement expired. EPA concludes that, as a qualifying facility with a qualifying power purchase commitment, Unit ES5A was an unaffected unit through December 31, 2005 under § 72.6(b)(5).

However, since the December 31, 2005 expiration of the January 28, 1991 amended agreement, Craven County has been selling electricity via short term power purchase agreements to PJM, a regional transmission organization that coordinates the selling and distribution of wholesale electricity on the open market in Midwestern and Mid-Atlantic States and the District of Columbia. These short term power purchase agreements do not establish a fixed price or fixed price formula for electricity generated and sold by Craven County. Instead, Craven County sells its generation at the market price and has the same opportunity to pass through the costs of Acid Rain Program compliance as any unit subject to the Acid Rain Program. Consequently, EPA finds that, starting January 1, 2006, Unit ES5A did not have a qualifying power purchase commitment and was no longer exempt from the Acid Rain Program under § 72.6(b)(5). CMS does not claim, and EPA sees no basis for claiming, that Unit ES5A qualifies for any other exemption from the Acid Rain Program.

⁵ According to CMS, while no financial data for years prior to 1995 were available, the data for 1995-2005 are representative of operations, revenues, and costs at Craven County. August 31, 2009 e-mail from Sherilyn Burnett Young at 1.

⁶ The cost of fuel consumption associated with energy production is calculated by CMS for any given month by multiplying the fuel burn rate (in tons per Mwh) by the cost of the fuel per unit (in dollars per ton). The fuel is weighed by scales before entering the boiler fuel system. August 31, 2009 e-mail from Sherilyn Burnett Young at 1.

CMS argued that, regardless of whether Unit ES5A qualifies for any exemption under § 72.6(b) from the Acid Rain Program, the unit's title V permit covering Craven County "granted the facility a Permit Shield from the acid rain provisions." October 10, 2005 petition at 1. Section 2.3 of Craven County's title V permit, which was issued on October 15, 2007, states that Unit ES5A "is a 'qualifying facility' under the acid rain provisions of § 72.6(b)(5) as determined prior to November 15, 1990 which is exempt from the acid rain program pursuant to § 72.6(a)(3)(v)." Air Quality Permit No., 06419T19, Facility ID: 2500158, Craven County Wood Energy, L.P., New Bern, North Carolina, Craven County at 14.

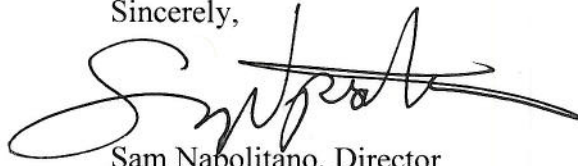
EPA rejects CMS's claim that, because of this title V permit provision, Unit ES5A is not subject, starting January 1, 2006, to the Acid Rain Program. First, on its face, the language in Section 2.3 of Craven County's title V permit does not state a proper basis for exempting Unit ES5A. Section 2.3 states that the unit meets the requirement in § 72.6(b)(5) of being a qualifying facility but asserts that the unit is exempt under § 72.6(a)(3)(v), a provision that does not provide for an exemption. On the contrary, the provision states that a facility that was exempt under § 72.6(b)(5) and does not continue to be a qualifying facility is an affected unit. More fundamentally, Section 3(R)(2) of Craven County's title V permit (*id.* at 19) states that "[c]ompliance with the terms and conditions of this permit shall be deemed compliance with applicable requirements, where such applicable requirements are included and specifically identified in the permit as of the date of permit issuance." However, one of the terms and conditions of this permit (in Section 3(R)(2)(c)) is that "[a] permit shield shall not alter or affect:...the applicable requirements under Title IV", i.e, the Acid Rain Program. *Id.* This permit provision in Section 3(R)(2)(c) is identical to the provisions addressing the effect of the permit shield on the Acid Rain Program in North Carolina's title V permitting regulations (15A NCAC O2Q.0512(a)(3)(C)) and EPA's regulations governing title V permitting by States (40 CFR 70.6(f)(3)). In short, Unit ES5A's title V permit expressly states that the permit shield language to which CMS refers does not supersede the applicability provisions in CAA title IV, which are implemented in the Acid Rain Program regulations. EPA therefore finds that the this permit shield language does not alter or affect the status of Unit ES5A as an affected unit starting January 1, 2006 under the Acid Rain Program.

Conclusion

Craven County Unit ES5A is an affected unit, starting January 1, 2006, and subject to the requirements of the Acid Rain Program. Prior to that date, the unit was an unaffected unit because it was exempt from the Acid Rain Program under § 72.6(b)(5). This determination relies, and is contingent, on the accuracy and completeness of the representations in the October 10, 2005 petition and supplemental information provided on November 6, 2006, September 4 and 17 and October 3, 2008, and February 2 and 9, May 12, August 31, and September 23, 2009, and is appealable under 40 CFR part 78 (§ 72.6(c)(5)). The Acid Rain Program regulations require you to send copies of this letter to each owner or operator of Unit ES5A at Craven

County (§ 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) 343-9077.

Sincerely,

A handwritten signature in black ink, appearing to read 'S. Napolitano', with a long horizontal flourish extending to the right.

Sam Napolitano, Director
Clean Air Markets Division

cc: David F. Putney, NC Dept. of Environment and Natural Resources
Art Hofmeister, EPA Region 6
David Lloyd, EPA Region 6