



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

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OFFICE OF
AIR AND RADIATION

Fred Carl
Director of Environmental and Safety
Black Hills Corporation
625 9th Street
Rapid City, SD 57701

Dear Mr. Carl:

This letter represents U.S. EPA's determination of applicability under § 72.6(c) of the Acid Rain regulations for Black Hills Corporation's (Black Hills) Las Vegas Cogeneration (LVC) Unit 1 (ORISPL 10761) located in Las Vegas, Nevada. This determination is made in response to Black Hills' request dated May 13, 2005 for an applicability determination.¹ For the reasons discussed below, U.S. EPA determines that, starting January 1, 2002, the LVC Unit 1 is subject to the Acid Rain Program and is not exempt under § 72.6(b).

Background

Sections 402(17)(C) 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)(C) (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 enactment of title IV, i.e., November 15, 1990). EPA interprets these provisions, and §§ 72.2 and 72.6 of the Acid Rain Program regulations implementing these 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).

According to the description in Black Hills' May 13, 2005 request and the supporting information provided by letter dated May 23, 2005, construction of LVC Unit 1 began on March 15, 1993, and the unit commenced commercial operation in May 1994.

¹ The delay in our response is due to our consideration of this applicability determination in context of other applicability determinations being reviewed.

Further, LVC Unit 1 is a combined cycle unit without auxiliary firing and is fired with 100% pipeline quality natural gas. The nameplate capacities of the unit's combustion turbine generator and steam turbine generator are 44 MWe and 11 MWe respectively. The unit is equipped with water injection and selective catalytic reduction (SCR), and has a net output capacity of 54 MWe.² The unit's maximum design heat input capacity is 397 million Btu/hr.

LVC Unit 1 is a qualifying cogeneration facility that supplies hot water to the adjacent Sunco tomato growing facility for heating. According to Black Hills' May 13, 2005 letter, the original power purchase contract, which was between Las Vegas Cogeneration, Inc. and Nevada Power Company (NPC), was signed in July 1989. By letter dated May 23, 2005, Black Hills submitted the original power sales contract and the current power purchase contract. However, the power sales contract submitted to EPA as the original contract was actually signed on February 13, 1990. Consequently, in this applicability determination, EPA references the February 13, 1990 contract (1990 contract) and treats Black Hills' references to the "1989 contract" as actually referring to the 1990 contract.

The 1990 contract required that Las Vegas Cogeneration, Inc. lease or own, design, construct, operate, maintain, and make improvements in a generating facility (and certain interconnection facilities) with a contract capacity of 32 MW, an expected net annual electric energy output of 147,000 MWh, and an expected firm operation date of May 1, 1992 (1990 contract, Sections 1.4-1.5 and 4.1). The contract further required that the contract capacity and the entire net electric energy output of the facility (during on-peak and off-peak hours) be made available to NPC (*id.*, Sections 1.7 and 10.1). While the contract had a termination date of April 30, 2022 (*id.*, Section 1.6), contract termination would occur earlier under certain circumstances, i.e., within 30 days after the failure of Las Vegas Cogeneration, Inc. to meet certain specified deadlines concerning the facility (*id.*, Section 3.2). Further, the 1990 contract required Las Vegas Cogeneration, Inc. to deposit with NPC -- upon execution of Exhibit B of the contract (i.e., on February 13, 1990) and before NPC would likely have commenced any construction -- the estimated cost for NPC to interconnect with the facility (*id.*, Section 5.2.1). Finally, the contract set fixed capacity and energy rates payable by NPC for summer on-peak, summer off-peak, winter on-peak, and winter off-peak for January 1990-April 1991 and provided for an annual adjustment each May thereafter equal to

² Las Vegas Cogeneration Limited Partnership, 117 FERC ¶ 61,309 at 62,486 (2006). EPA notes that, in a submission to the Federal Energy Regulatory Commission (FERC), Las Vegas Cogeneration Limited Partnership stated that the unit's maximum net output capacity is 57.3 MWe. Petition of Las Vegas Cogeneration Limited Partnership for Recertification as Qualifying Facility and Limited Waiver of Qualifying Facility Efficiency Standard, FERC Form 556 at 3, Docket Nos. EL07-7-000 and QF89-251-009 (Oct. 13, 2006). Although EPA is relying here on the value determined by the FERC, using the value submitted by the company would not change the result in this determination.

80% of changes in the Consumer Price Index for all Urban Consumers from the January 1991 index (id., Exhibit A).

Las Vegas Cogeneration, Inc. subsequently failed to meet two of the deadlines specified in Section 3.2 of the 1990 contract. Specifically, the requirements to obtain primary construction permits for the generating facility and interconnection facilities, and to award the major equipment contracts for the facilities, before March 1, 1991 were not met. In addition, the requirement to advance the cost of interconnection facilities to be built by NPC was not met. Consequently, NPC terminated the 1990 contract on April 1, 1991, before construction of Las Vegas Cogeneration, Inc.'s generating facility and interconnection facilities, and of NPC's interconnection facilities, under the contract commenced.³

On May 27, 1992, a new power sales contract (1992 contract) was signed by Las Vegas Cogeneration Limited Partnership and NPC. That contract has some similarities to, as well as some significant differences from, the 1990 agreement. Under the 1992 contract, Las Vegas Cogeneration, Inc. has more limited participation.⁴ Further, while the location of the generating facility was the same under both contracts, the facility under the 1992 contract was about 41% larger, having a contract capacity of 45 MW and an estimated net annual electric energy output of 208,000 MWh, and was to be completed by February 1, 1994 (1992 contract, Section 1.4). In addition, the contract required that the contract capacity and the entire net electric energy output of the facility, but only during on-peak hours, be made available to NPC and that NPC would have right of first refusal during any other hours (id., Section 1.1.1). The contract had a termination date of May 31, 2024 (id., Section 3.1), but contract termination would occur earlier under certain circumstances, e.g., within 30 days after the failure of Las Vegas Cogeneration Limited Partnership to meet certain specified deadlines concerning the facility (id., Section 3.2). Further, the 1992 contract required Las Vegas Cogeneration, Inc. to deposit upfront with NPC the estimated cost to NPC of interconnecting with the facility (id., Section 8.8.2). Finally, the contract fixed the capacity and energy rates -- higher than those in the 1990 contract -- for summer on-peak, summer off-peak, winter on-peak, and winter off-peak for January 1991-April 1992 and provided for an annual adjustment each May thereafter equal to 80% of changes in the Consumer Price Index for all Urban Consumers from the January 1991 index (id., Exhibit A).⁵

³ Letter to Mr. Benjamin J Campbell, Las Vegas Cogeneration Limited Partnership from James C. Holcombe, Nevada Power Company (Apr. 1, 1991).

⁴ Las Vegas Cogeneration Limited Partnership comprised a general partner, United Cogen, which was owned by a privately held corporation called United Company, and a limited partner with a 15% interest, Las Vegas Cogeneration, Inc. Las Vegas Cogeneration Limited Partnership, 57 FERC ¶ 62,035 at 63,043 (1991).

⁵ Black Hills asserts that the higher base rates in the 1992 contract reflect the base rates in the 1990 contract, adjusted based on the Consumer Price Index as provided in the 1990

In 1999, the ownership of the facility built under the 1992 contract (i.e., LVC Unit 1) changed to include, among other entities, an entity indirectly owned by Enron North America Corporation.⁶ On August 31, 2001, the facility was purchased from Enron North America Corporation by Black Hills. According to Black Hills' May 13, 2005 request, Black Hills and the permitting authority (Clark County Air Quality Management) have been treating LVC Unit 1 as exempt from the Acid Rain Program. However, based on its review of the 1990 contract (which Black Hills states only became available for review in February 2005), Black Hills now believes that the unit's exemption "is unclear, and therefore [the unit] may be subject to the Acid Rain Program." Black Hills adds that "justification is reasonable that the 1992 contract was a continuation of the defaulted [1990] contract" and that the "1992 contract was essentially unchanged from the [1990] version." The 1990 contract, of course, was in effect on November 15, 1990, which is the date on which a unit must have a qualifying power purchase commitment in order to qualify for an exemption under 40 CFR 72.6(b)(5) from the Acid Rain Program.

EPA's Determination

Since LVC Unit 1 combusts natural gas and serves a generator that produces electricity for sale, LVC Unit 1 is a "unit" and, unless otherwise exempt from the Acid Rain Program, is a "utility unit" and subject to the requirements of the Acid Rain Program. See 40 CFR 72.2 (definitions of "unit" and "utility unit"); and 40 CFR 72.6(b)(4) and (5) (exemptions for certain cogeneration units). Further, since LVC Unit 1 has equipment used to produce steam that is used sequentially (first in the combustion turbine to produce electricity for sale to a utility and then in the heat recovery boiler to produce hot water for the Sunco tomato growing facility, as well as in the steam turbine to produce electricity), the unit is a "cogeneration unit."⁷ See 40 CFR 72.2 (definition of "cogeneration unit"). Moreover, the unit has been, and apparently continues to be, a "qualifying cogeneration facility."⁸ The maximum design heat input capacity of LVC Unit 1 is 397 million Btu/hr, and, therefore, the unit's potential electrical output capacity ("PEOC") is 38.8 MWe.⁹

contract. EPA assumes, for purposes of this determination, that Black Hills' assertion is correct.

⁶ Investigation of Certain Enron-Affiliated QFs, Saguaro Power Company, Las Vegas Cogeneration Limited Partnership, 102 FERC ¶ 61,199 at 61,580-81 (2003).

⁷ See Las Vegas Cogeneration Limited Partnership, 60 FERC ¶ 62,094 at 63,274 (1992).

⁸ See Las Vegas Cogeneration Limited Partnership, 117 FERC at 62,486.

⁹ PEOC for a unit is calculated by dividing the maximum design heat input capacity in Btu/hr of the unit by 3 (reflecting the assumed efficiency of the unit), dividing again by 3,413 (reflecting the assumed heat rate), and dividing by 1,000 (converting to MWe). See 40 CFR part 72, appendix D.

Under § 72.6(b)(4)(ii), a cogeneration unit constructed on or after November 15, 1990 is exempt from the Acid Rain Program if it meets certain conditions concerning electricity sales. The unit must supply such electricity -- initially on an annual basis and then on a three-year rolling average basis -- in an amount not exceeding the greater of 219,000 MWh or one-third of its potential electrical output. Because one-third of potential electrical output for LVC Unit 1 equals 113,296 MWh (i.e., 38.8 MWe divided by 3 and multiplied by 8,760 hrs per year or 113,296 MWh), the unit's electricity sales threshold for qualifying for the exemption is 219,000 MWh per year. Data submitted by Black Hills show that annual electricity sales from LVC Unit 1 to NPC were less than 219,000 MWh in 1994-1999 and that the unit's three-year rolling average electricity sales were less than 219,000 MWh until the three-year period 1999-2001. Therefore, LVC Unit 1 was exempt under §72.6(b)(4)(ii) from the Acid Rain Program until January 1, 2002, when the unit lost that exemption.

Section 72.6(b)(5) provides another exemption from the Acid Rain Program for certain cogeneration units. Under that provision, the unit must be a qualifying facility that has a qualifying power purchase commitment, effective as of November 15, 1990, to sell at least 15% of its total planned net output capacity and that consists of one or more units with total installed net output capacity not exceeding 130% of total planned net output capacity. If the unit initially meets these requirements, but subsequently is no longer a qualifying facility or no longer has a qualifying power purchase commitment, it is no longer exempt under § 72.6(b)(5).

Section 405(g)(6)(A) of the Clean Air Act provides that, unless the Administrator approves a facility as an opt-in unit under Section 410:

the provisions of this title [IV] shall not apply to a "qualifying small power production facility" or "qualifying cogeneration facility" (within the meaning of section 3(17)(C) or 3(18)(B) of the Federal Power Act)...if, as of the date of enactment,

- (i) an applicable power sales agreement has been executed; or
- (ii) the facility is the subject of a State regulatory authority order requiring an electric utility to enter into a power sales agreement with, purchase capacity from, or (for purposes of establishing terms and conditions of the electric utility's purchase of power) enter into arbitration concerning, the facility;
- (iii) an electric utility has issued a letter of intent or similar instrument committing to purchase power from the facility at a previously offered or lower price and an power sales agreement is executed within a reasonable period of time; or
- (iv) the facility has been selected as a winning bidder in a utility competitive bid solicitation. 42 U.S.C. 7651d(g)(6)(A).

Language creating a similar exemption for qualifying facilities under contract as of a specified date originated in an amendment offered by Senator Wirth on the floor of

the Senate on March 22, 1990 and was included in S. 1630 (which was further amended and eventually became the Clean Air Act Amendments of 1990). S. 1630 exempted, from the sulfur dioxide (SO₂) allowance trading program, any qualifying facility that "has commenced operation as of December 31, 1989" or "entered into a power sales contract prior to December 31, 1989." Cong. Rec. S3027 (Mar. 22, 1990); Legis. Hist. of CAA Amendments of 1990, S. Prt.103-38, 103d Cong. 1st Sess., Vol. IV at 6294. As Senator Wirth explained in introducing his amendment to S. 1630:

This amendment would classify IPPs with contracts or accepted competitive bids as of December 31, 1989, to be classified as an existing unit...Grandfathering these units is fair because these units are under contract or have accepted price bids. Any [sic] they cannot pass on extra costs of allowances the way a regulated utility can. Cong. Rec. S3027-28; S. Prt.103-38, Vol. IV at 6296.

A similar exemption for qualifying facilities was introduced in an amendment offered by Representative Sharp to H.R. 3030 in committee on April 5, 1990 and then was included in the House bill, H.R. 3030. H.R. 3030 exempted, from the SO₂ allowance trading program, qualifying facilities "that sell power pursuant to a long-term contract executed on or before December 31, 1989" or that have an order on or before that date requiring a utility to execute such a contract. Report of Committee on Energy and Commerce, U.S. House of Representatives on H.R. 3030, H. Rept. 101-490, 101st Cong. 2d Sess. at 370 (May 17, 1990); S. Prt.103-38, Vol. II at 3394.

On March 23, 1993, EPA finalized § 72.6(b)(5) of the Acid Rain Program regulations, implementing the exemption in section 405(g)(6)(A) of the Clean Air Act. In the preamble of the March 23, 1993 rule, EPA cited the above-discussed statement by Senator Wirth and explained that "the basic requirement of [section 405(g)(6)] is that the source has already committed to generate electricity at a fixed price and is unable to pass through to the purchaser the costs of compliance with title IV." 58 FR 15634, 15638 (1993).

In this case, the facility that was subject to the 1990 contract was never constructed or operated. The 1990 contract was terminated on April 1, 1991, at which time little or no construction had commenced on the generating facility and associated interconnection facilities. Over one year later, a new power sales agreement (i.e., the 1992 contract) was signed, and it was under the latter contract that LVC Unit 1 was constructed in 1993-94 and operated starting in 1994. In short, the 1990 contract never governed the construction, operation, or the electricity rates of LVC Unit 1 and thus never required LVC Unit 1 to generate electricity at a fixed price. Instead, the construction, operation, and electricity rates of LVC Unit 1 are governed by the 1992 contract. Although the 1992 contract limited the rates that could be charged for electricity from the unit, that contract was signed long after November 15, 1990.

Black Hills suggests that the 1992 contract is "essentially unchanged from the [1990] contract" and should be treated as a "continuation of the defaulted [1990] contract." While it is unclear whether Black Hills is asserting that the 1990 and 1992

contacts should be treated as the same contract or that the 1992 contract should be treated as an amendment of the 1990 contract, EPA rejects both approaches. Because of the long gap (about 14 months) between the termination of the 1990 contract and the signing of the 1992 contract and in light of Congress's focus on contracts in place on November 15, 1990, EPA maintains that it would be anomalous and illogical to treat the terminated 1990 contract as continuing -- either as the same contract¹⁰ or as an amended contract -- after the termination date and during a long period when no contract was actually in effect. EPA notes that its approach of treating the contracts as two separate contracts is consistent with the fact that the facility contemplated and covered by the 1990 contract is significantly different from the facility contemplated and covered by the 1992 contract. While the location of the facility would be the same under the two contracts, the 1992 contract requires a facility that is about 41% larger than that of the facility required by the 1990 contract: the 1992 contract capacity and estimated net annual electric energy output are 45 MW and 208,000 MWh, as compared with the 1990 contract capacity and estimated net annual electric energy output of 32 MW and of 147,000 MWh.

Because the only power sales agreement to which LVC Unit 1 was ever subject is the 1992 contract executed on May 1, 1992, the unit did not have as of November 15, 1990, "an applicable power sales agreement" (42 U.S.C. 7651d(g)(6)(A)(i)) or a "power purchase commitment" (40 CFR 72.6(b)(5)(i)) and thus does not have a "qualifying power purchase commitment" (*id.*). See 40 CFR 72.2 (defining "power purchase commitment" as "a commitment or obligation of a utility to purchase electric power from a facility pursuant to...[a] power sales agreement" and defining "qualified power purchase commitment" as "a power purchase commitment in effect as of November 15, 1990" with certain allowed changes to that commitment). In short, LVC Unit 1 does not qualify for an Acid Rain Program exemption under § 72.6(b)(5) because the unit lacks a qualifying power purchase commitment.

Moreover, even if it were assumed, *arguendo*, that LVC Unit 1 had a qualifying power purchase commitment (i.e., the 1990 contract or the 1990 contract "amended" by the 1992 contract), the unit would still fail to qualify for the exemption under § 72.6(b)(5). Under § 72.6(b)(5), another requirement for the exemption is that the unit's installed net output capacity cannot exceed 130% of the "total planned net output capacity." As defined in § 72.2, "total planned net output capacity" focuses on the contract terms "as of November 15, 1990" and equals the amount of "planned generator output capacity", less the "power designed to be used at the power production facility," as of that date.¹¹ 40 CFR 72.2 (definition of "total planned net output capacity"); see also

¹⁰ Moreover, contrary to Black Hills' assertion, the 1990 and 1992 contracts are not "essentially" the same. As discussed above, there are significant differences between the contracts concerning, e.g., the portion of electrical output that NPC is required to take.

¹¹ EPA notes that this is different than the approach to post-November 15, 1990 amendments in the definition of "qualifying power purchase commitment," which allows for certain types of post-November 15, 1990 amendments to a contract in place on

58 FR 15639 (explaining that, under the regulations, “EPA will allow a 30 percent increase in net capacity from the planned level on November 15, 1990 to the actual installation.”) As discussed above, LVC Unit 1 has a net output capacity of 54 MW, which is the unit’s “total installed net output capacity” as defined in § 72.2.¹² Consequently, LVC Unit 1’s total installed net output capacity is about 169%, and obviously exceeds 130%, of the unit’s total planned net output capacity, which is the 1990 contract capacity of 32 MW. Consequently, the unit would still not be exempt from the Acid Rain Program under § 72.6(b)(5). See 58 FR 15639 (stating that, “[i]f the facility is composed of one unit” whose net capacity exceeds planned net capacity by over 130%, “the entire unit would become affected.”)

U.S. EPA concludes that LVC Unit 1 was subject to the Acid Rain Program starting in January 1, 2002. The unit was exempt from the Acid Rain Program until January 1, 2002 under § 72.6(b)(4)(ii) and never qualified for an exemption under § 72.6(b)(5).

This determination is based solely on the representations made in Black Hills’ May 13, 2005 request, and the supporting information provided by Black Hills on May 23, 2005. This determination is appealable under 40 CFR part 78. The applicable regulations require you to send copies of this letter to each owner or operator of Las Vegas Cogeneration Unit 1. 40 CFR 72.6(c)(1). If you have any further questions regarding the next steps in complying with the Acid Rain Program, please contact Jenny Jachim of my staff at (202) 343-9095.

Sincerely,

/s/ (February 6, 2008)

Samuel A. Napolitano, Director
Clean Air Markets Division

cc: Gerardo Rios, Permits Office, Chief, U.S. EPA Region 9
Roger Kohn, U.S. EPA Region 9
Steve Frey, U.S. EPA Region 9
Richard Beckstead, Permitting Manager, Clark County, DAQEM
Andrew C. Hanson, OECA

November 15, 1990 (see 40 CFR 72.2) with the result that the amended contract can still be a qualifying power purchase commitment.

¹² See n.1; and 40 CFR 72.2 (defining “total installed net output capacity” as “generator output capacity, excluding that portion of the electrical power actually used at the power production facility”).