

## 18 CFR Part 292

[Docket No. RM79-54]

**Interim Rule for Qualification of Gas-Fired Cogeneration Facilities for Purposes of the Incremental Pricing Program; Interim Rule****AGENCY:** Federal Energy-Regulatory Commission, DOE.**ACTION:** Interim rule.

**SUMMARY:** The Commission gives notice that it has adopted interim rules permitting certain gas-fired cogeneration facilities to be exempt from the incremental pricing provisions of the Natural Gas Policy Act of 1978 (NGPA). The exemption in the NGPA permits cogeneration facilities which qualify under the Commission's rules implementing section 201 of the Public Utility Regulatory Policies Act of 1978 (PURPA) to be exempt from the surcharges for natural gas otherwise provided under the incremental pricing provisions of the NGPA. Under the interim rules, cogeneration facilities which meet certain standards may file an affidavit that they are "qualifying cogeneration facilities," and thereby be exempted from incremental pricing.

**EFFECTIVE DATE:** November 9, 1979.**FOR FURTHER INFORMATION CONTACT:**

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**SUPPLEMENTARY INFORMATION:**

November 9, 1979.

**Background**

On September 28, 1979, the Commission issued final rules implementing the incremental pricing provisions of the Natural Gas Policy Act of 1978 (NGPA).<sup>1</sup> These rules provide, among other things, that natural gas used by "a qualifying cogeneration facility" shall be exempt from the incremental pricing provisions of the NGPA.<sup>2</sup> A qualifying cogeneration facility is defined in the regulations as a cogeneration facility which meets the requirements prescribed by the Commission pursuant to section 201 of the Public Utility Regulatory Policies Act of 1978 (PURPA).<sup>3</sup>

<sup>1</sup> Order No. 49, Docket No. RM79-14, issued September 28, 1979.

<sup>2</sup> Sections 282.201(a), and 282.203.

<sup>3</sup> Section 282.202(e).

On June 27, 1979, the Commission issued a notice of proposed rulemaking providing requirements for qualification of small power production and cogeneration facilities under section 201 of the PURPA.<sup>4</sup> At this time, the Commission has not promulgated a final rule establishing criteria for qualifying status.

An operative rule setting forth the requirements for a qualifying natural gas-fired cogeneration facility is necessary for the timely implementation of the Commission's incremental pricing program. Section 282.602 of the incremental pricing regulations requires that on or before December 1, 1978, each interstate pipeline must file with the Commission a tariff sheet reflecting a "reduced PGA" rate for the period January 1, 1980, to the effective date of the pipeline's next normally scheduled PGA filing. In order to calculate this reduced PGA rate, each pipeline must ascertain which of the customers it serves, whether directly or indirectly are wholly or partially exempt from being incrementally priced as to their use of natural gas. This information is to be provided by the filing by individual customers of exemption affidavits, a copy of which must be filed with the facility's natural gas supplier. By filing an affidavit, a customer affirms, under penalty of law, that he belongs to one of the several customer groups which is exempt from incremental pricing. In the case of the exemption for qualifying cogeneration facilities, therefore, an industrial customer cannot certify that his facility is a qualifying cogeneration facility until the Commission issues final rules so specifying.

In order to permit natural gas-fired cogeneration industrial end-users to file exemption affidavits in a timely fashion, and thus provide affected pipelines with the information needed to make accurate calculations as to their reduced PGA rates which will be effective January 1, 1980, the Commission finds good cause to issue interim regulations providing that certain existing gas-fired cogeneration facilities can obtain qualifying status on an interim basis, solely for the purpose of obtaining an exemption from incremental pricing.

The interim qualifying status available to certain existing gas-fired cogeneration facilities will not enable them to obtain any of the benefits set forth pursuant to section 210 of PURPA or to continue to retain the exemption from the incremental pricing of natural gas after final regulations are promulgated in this docket. Those

<sup>4</sup> Docket No. RM79-54, issued June 27, 1979 (44 FR 38872, July 3, 1979.)

benefits will be available only if a facility qualifies under the Commission's final rules in Docket No. RM79-54. The only benefit to be derived from this interim qualification is exemption from the incremental pricing of natural gas pending promulgation of the final regulations in this docket.

The Commission finds it appropriate to adopt for this interim rule certain provisions proposed in Docket No. RM79-54. In addition, the Commission finds it appropriate to make changes in other proposed provisions of that Docket for the purpose of this interim rule. The adoption of this interim rule in this manner does not reflect a final decision by the Commission as to which gas-fired cogeneration facilities will meet the criteria for qualification under the final rule in this docket. Rather, it indicates that the Commission finds these particular standards and procedures appropriate and expedient for use on an interim basis.

**Summary of the Interim Rule****§ 292.501 Scope.**

The purpose of the interim rule is limited to establishing an interim exemption from incremental pricing under the Natural Gas Policy Act of 1978.

**§ 292.502 Qualifying requirements for cogeneration facilities.**

Paragraph (a) provides that, for purposes of Title II of the Natural Gas Policy Act of 1978, a "qualifying cogeneration facility" is a cogeneration facility which was in existence on November 1, 1979, and which used natural gas as a fuel on or prior to that date. In addition, a qualifying cogeneration facility must meet the efficiency standards prescribed in § 292.502 (e) and (f) of this rule.

The fundamental concept behind the provision of benefits to cogeneration facilities is the ability of these facilities to make more efficient use of fuel needed to meet heat and power demands. This more efficient use of fuel is only accomplished when the waste or rejected heat from one power or heating process is used in another heating or power process. Thus, the "combined" or "joint" production of heat and power does not fully define cogeneration; the production must represent the sequential use of the same stream of energy or heat. Such sequential use ordinarily is more energy-efficient than separate production. Section 292.502(a) accordingly requires that a facility must produce electric energy and other forms of useful energy through the *sequential* use of energy.

Section 3 (18)(B)(ii) of the Federal Power Act provides that a qualifying cogeneration facility must be owned by a person "not primarily engaged in the generation or sale of electric power (other than electric power solely from cogeneration or small power production facilities)." Section 206(c)(2) of the Natural Gas Policy Act of 1978 provides that incremental pricing of gas shall not apply to the generation of electricity by any electric utility. Section 282.203(d) of the Commission's rules implements this exemption. Section 292.206(b) of the Commission's proposed rules in this docket would provide that a cogeneration facility may not qualify under section 201 of PURPA if more than 50 percent of the facility is owned by electric utilities.

The Commission wishes to ensure that cogeneration facilities which satisfy the technical requirements for qualification, but which, because of majority utility ownership, might not be eligible to be qualifying cogeneration facilities under section 201 of PURPA receive the same exemption available for electric utilities referred to above. Accordingly, this interim rule does not contain the ownership limitations set forth in § 292.206(b) of the proposed rules for qualification under section 201 of PURPA.

As a result, qualification under this interim rule is intended both to implement the exemption for qualifying cogeneration facilities in section 206(c)(3) of the NGPA, and to clarify the applicability of the exemption for electric utilities in section 206(c)(2) of the NGPA. Therefore, a cogeneration facility which meets the technical requirements for qualification under PURPA, but which might be excluded because of utility ownership, is nevertheless eligible to be a "qualifying cogeneration facility" for the purpose of exemption from incremental pricing. The Commission emphasizes that qualification of utility-owned facilities under this interim rule does not reflect qualifying status under section 201 of PURPA, or eligibility for the benefits provided under section 210 of PURPA. It is only intended to ensure that the combined effect of the exemptions for qualifying cogeneration facilities and for electric utilities does not exclude efficient cogeneration facilities.

Section 292.502(b) sets forth definitions used to calculate the efficiency of a facility. Subparagraph (1) defines a "cogeneration facility" as the equipment used to produce electric energy and other forms of useful energy (such as heat or steam) used for industrial, commercial, heating or

cooling purposes, through the sequential use of energy. Subparagraph (1) limits qualification to equipment used for cogeneration. Therefore, although gas may be used for other purposes at the same location, only gas used for qualifying cogeneration is exempt from incremental pricing.

Subparagraph (2) defines the "useful thermal energy output" of a cogeneration facility as the heat made available for use in an industrial process or for use as space or water heating or cooling.

Subparagraph (3) defines the "useful power output" of a cogeneration facility as the electrical or mechanical energy made available for use, exclusive of any use solely in the power production process.

Subparagraph (4) provides that "total energy input" means the total energy of all forms supplied from external sources to the cogeneration facility. In the case of energy in the form of fossil fuel, the energy input is to be measured by the lower heating value of such fuels.

Subparagraph (5) defines "working fluid energy input" to a cogeneration facility as the enthalpy of steam leaving a boiler minus that of the feed water, when the steam is subsequently used in a topping cycle.

Subparagraph (6) defines "overall energy efficiency" as the ratio of the sum of all useful energy outputs to the total energy input of the facility, measured by means of actual data or estimates. The definition provides that any energy used exclusively in the thermal process of a topping-cycle (supplementary firing) facility shall not be included as energy output or energy input for the purpose of determining the cogeneration facility's overall energy efficiency. The definition of "overall energy efficiency" for this rule is different from that initially proposed in Docket No. RM79-54 in that it is based only on the energy output of the heat and power production equipment, without requiring a computation of process heat utilization efficiency. The Commission makes this change in order to simplify the computation of energy efficiency.

Subparagraph (7) defines "internal energy efficiency" as the ratio of the sum of all useful energy outputs to the working fluid energy input, measured by means of actual data or estimates. This definition also provides that any energy used exclusively in the thermal process of any topping-cycle (supplementary firing) facility shall not be included as energy output or energy input for the purpose of determining the cogeneration facility's internal energy efficiency.

Cogeneration facilities can generally be grouped into two distinct classes: "topping" cycles and "bottoming" cycles. In a topping-cycle cogeneration facility, electricity is generated first and the rejected energy is typically used in a thermal process. Examples of topping-cycles are backpressure steam turbines and combustion turbines with waste heat recovery boilers. Such systems can produce both electric power and process steam. Subparagraph (8) accordingly defines a "topping-cycle cogeneration facility" as a facility in which the energy input is first used to produce power, and the waste heat from power production is then used to provide useful heat.

Bottoming-cycle cogeneration facilities use high-temperature energy for a thermal process first, with subsequent use of the rejected heat for generating electricity. Subparagraph (9) defines a "bottoming-cycle cogeneration facility" as a facility in which the energy input to the system is first applied to a useful heating process, and the residual heat emerging from the process is then used for power production.

Subparagraph (10) states that "supplementary firing" means natural gas used only in the thermal process of a topping cycle, or only in the electric generation process of a bottoming-cycle.

Paragraph (c) sets forth efficiency standards for topping-cycle cogeneration facilities. Only topping-cycle cogeneration facilities are required to meet the efficiency standards set forth in this interim rule. (Complex facilities, with both topping and bottoming generation of electricity or mechanical energy, may be considered bottoming cycles for the purpose of this interim rule). Subparagraph (1) requires that, to qualify, the overall energy efficiency of a cogeneration facility must be no less than 0.55.

An alternative efficiency standard is provided in subparagraph (2) which eliminates boiler efficiency as a standard for qualification. Under this standard, the internal energy efficiency must be not less than 0.70. The alternative efficiency standard is provided to permit qualification of facilities using low-quality fuel burned in association with natural gas, giving rise to low boiler efficiencies.

Paragraph (d) states that a bottoming-cycle cogeneration facility does not have to meet any efficiency standards in order to be a qualifying facility.

Paragraph (e) sets forth the limitation on eligibility for qualification under this interim rule. In order to qualify, a facility must have been in existence on November 1, 1979, and must use natural gas as an energy input. It need not use

gas exclusively, but can combine gas with other fuel sources.

Paragraph (f) provides that the Commission may waive any of the standards for qualification, if it finds that such waiver is necessary to encourage cogeneration.

Paragraph (g)(1) provides that obtaining qualifying status for purposes of this interim rule does not make a facility eligible for the rates and exemptions set forth in section 210 of PURPA.

Paragraph (g)(2) provides that interim qualification does not necessarily assure that a facility will be a qualifying facility under the Commission's final rules in Docket No. RM79-54, which implement section 201 of PURPA.

Interim qualification will terminate upon the issuance of final rules in Docket No. RM79-54. Facilities qualifying under this interim rule will have to qualify under that rule in order to retain their exemption from incremental pricing.

**§ 292.503 Procedures for obtaining qualifying status.**

Section 292.503 provides that an applicant who meets the standards must indicate on the exemption affidavit provided under the incremental pricing program that it is a qualifying cogeneration facility. Upon filing that affidavit with the Commission, with a copy to the supplying pipeline, such facility shall be exempt from incremental pricing.

Section 553(d) of Title 5, United States Code, provides that a substantive rule need not be published 30 days prior to taking effect if the rule grants or recognizes an exemption. As stated above, the regulations below set forth criteria for the determination of an exemption from the Commission's incremental pricing program. Thus, the 30-day period is not required with respect to these rules. The regulations are being made effective immediately, for the reasons stated above.

In consideration of the foregoing, Subchapter K, Chapter I, Title 18, Code of Federal Regulations, is amended by adding a new Part 292 as set forth below, effective on the issuance of these rules.

By the Commission.

Kenneth F. Plumb,  
Secretary.

(1) Subchapter K is amended in the table of contents by adding in the appropriate numerical order a new Part number and heading to read as follows:

**SUBCHAPTER K—REGULATIONS UNDER THE PUBLIC UTILITY REGULATORY POLICIES ACT OF 1978**

**PART 292—REGULATION OF SMALL POWER PRODUCTION AND COGENERATION FACILITIES UNDER SECTIONS 201 AND 210 OF THE PUBLIC UTILITY REGULATORY POLICIES ACT OF 1978**

(2) Subchapter K is amended by adding a new Part 292 to read as follows:

**PART 292—REGULATION OF SMALL POWER PRODUCTION AND COGENERATION FACILITIES UNDER SECTIONS 201 AND 210 OF THE PUBLIC UTILITY REGULATORY POLICIES ACT OF 1978**

**Subparts A through D—[Reserved]**

**Subpart E—Qualification of Cogeneration Facilities for Incremental Pricing Exemption**

**Sec.**

292.501 Scope.

292.502 Qualifying requirements for cogeneration facilities.

292.503 Procedures for obtaining qualifying status.

Authority: Public Utility Regulatory Policies Act of 1978, Pub. L. 95-617; Natural Gas Policy Act of 1978, Pub. L. 95-621; Department of Energy Organization Act, Pub. L. 95-61; E.O. 12009, 42 FR 46267.

**Subparts A through D—[Reserved]**

**Subpart E—Qualification of Cogeneration Facilities for Incremental Pricing Exemption**

**§ 292.501 Scope.**

This subpart defines qualifying cogeneration facilities for the sole purpose of establishing an interim exemption from incremental pricing under the Natural Gas Policy Act of 1978.

**§ 292.502 Qualifying requirements for cogeneration facilities.**

(a) *Definition of qualifying cogeneration facility.* For purposes of Title II of the Natural Gas Policy Act of 1978 (NGPA), and Subpart B of Part 282 of the Commission's rules, the term "qualifying cogeneration facility" means a cogeneration facility which:

(1) Was in existence on November 1, 1979;

(2) Used natural gas as a fuel on or prior to that date;

(3) Produces electric energy and another form of useful energy (such as heat or steam), used for industrial, commercial, heating or cooling purposes,

through the sequential use of energy; and

(4) Meets the efficiency standards set forth in this section.

(b) *Definitions.* For purposes of this subpart:

(1) "Cogeneration facility" means equipment used to produce electric energy and another form of useful energy (such as heat or steam), used for industrial, commercial heating or cooling purposes, through the sequential use of energy;

(2) "Useful thermal energy output" of a cogeneration facility means the heat made available for use in an industrial process or for use as space or water heating;

(3) "Useful power output" of a cogeneration facility means the electrical or mechanical energy made available for use, exclusive of any used solely in the power production process;

(4) "Total energy input" means the total energy of all forms supplied from external sources to the cogeneration facility. In the case of energy in the form of fossil fuel, the energy input is to be measured by the lower heating value of such fuel;

(5) "Working fluid energy input" to a cogeneration facility means the enthalpy of steam leaving a boiler minus that of the feed water, when the steam is subsequently used in a topping cycle;

(6) "Overall energy efficiency" means the ratio of the sum of all useful thermal and power outputs to the total energy input of the cogeneration facility, measured by means of actual data or estimates. Any energy used exclusively in the thermal process of a topping-cycle (supplementary firing) facility shall not be included as energy output or energy input for the purpose of determining the cogeneration facility's overall energy efficiency;

(7) "Internal energy efficiency" means the ratio of the sum of all useful thermal and power outputs to the working fluid energy input, measured by means of actual data or estimates. Any energy used exclusively in the thermal process of a topping-cycle (supplementary firing) facility shall not be included as energy output or energy input for the purpose of determining the cogeneration facility's internal energy efficiency;

(8) A "topping-cycle cogeneration facility" means a cogeneration facility in which the energy input to the facility is first used to produce power, and the waste heat from power production is then used to provide useful heat;

(9) A "bottoming-cycle cogeneration facility" means a cogeneration facility in which the energy input to the system is first applied to a useful heating process, and the residual heat emerging from the

process is used then for power production; and

(10) "Supplementary firing" means natural gas used only in the thermal process of a topping-cycle cogeneration facility, or only in the electric generating process of a bottoming-cycle cogeneration facility.

(c) *Efficiency standards for topping-cycle facilities.* For topping-cycle cogeneration facilities using natural gas, with or without any other fuels, the following efficiency standard applies:

(1) The facility's overall energy efficiency must be not less than 0.55, or

(2) The internal energy efficiency of the facility must be not less than 0.70.

(d) *Efficiency standards for bottoming-cycle facilities.* For bottoming-cycle cogeneration facilities, there is no efficiency standard for qualification.

(e) *Eligibility.* In order to obtain qualifying status under the interim rule, a cogeneration facility must:

(1) Have been in existence on November 1, 1979, and

(2) Have used natural gas as an energy input on or prior to November 1, 1979.

(f) *Waiver.* The Commission may waive any of the provisions of this subpart if it determines that such waiver is necessary to encourage cogeneration.

(g) *Limitations of benefits of interim qualification.* Obtaining qualifying status for purpose of this interim rule does not:

(1) Constitute qualifying status for purposes of section 210 of the Public Utility Regulatory Policies Act of 1978 (PURPA), or

(2) Assure that a facility will be a qualifying facility under the Commission's final rules implementing section 201 of PURPA or Title II of the NGPA.

**§ 292.503 Procedures for obtaining qualifying status.**

(a) In order to be a qualifying facility for purposes of exemption from incremental pricing, a facility must meet the standards set forth in § 292.502.

(b) If a cogeneration facility meets the standards set forth in § 292.502, the owner or operator of the facility may file an executed exemption affidavit that the facility is a qualifying cogeneration facility, pursuant to the procedures set forth in § 282.204 of the Commission's rules.