

(Decision No. C80-1846)

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF COLORADO

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IN THE MATTER OF THE RULES OF THE )	CASE NO. 5970
PUBLIC UTILITIES COMMISSION OF THE )	
STATE OF COLORADO REGULATING RATES )	ORDER AND NOTICE OF PROPOSED RULE-
AND SERVICE OF COGENERATORS AND )	MAKING WITH RESPECT TO COGENERATION
SMALL POWER PRODUCERS )	AND SMALL POWER PRODUCERS

- - - - -  
September 23, 1980  
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TO: ALL ELECTRIC PUBLIC UTILITIES AND  
ALL INTERESTED PERSONS, FIRMS OR CORPORATIONS

NOTICE, STATEMENT AND FINDINGS OF FACT

In accordance with C.R.S. 1973, 24-4-103(3), notice is hereby given that the Public Utilities Commission of the State of Colorado proposes to establish rules regulating rates and service regarding Colorado intrastate cogenerators and small power producers, as defined by Public Law 95-617 (16 U.S.C. 2601, et seq.), commonly known as the "Public Utility Regulatory Policies Act of 1978" ("PURPA" or "Act").

On November 9, 1978, PURPA was enacted into Federal Law. Section 201 of PURPA and the rules implementing Section 201 define cogeneration and small power production facilities qualifying for special rates and terms for the purchase and sale of electric power between utilities and cogenerators or small power producers.

In order for a facility to qualify under Section 201 of the Act as a small power production facility, a facility's power production capacity must be owned by the same person, at the same location and be less than 80 megawatts; (2) must derive more than 50% of its total energy input from biomass, wastes, renewable resources or any combination and may not derive more than 25% of its total energy from oil, natural gas and/or coal; and (3) the facility may not be owned by a person primarily engaged in the generation or sale of electrical power.

In order for a facility to qualify under Section 201 of the Act as a cogeneration facility, the equipment must be used to produce both electrical and useful thermal energy for industrial, commercial, heating or cooling purposes, through the sequential use of energy.

Section 210 of PURPA requires state regulatory commissions to establish rules which regulate the rates for selling and purchasing electric power between qualifying small power producers and cogenerators on the one hand and electric public utilities on the other hand. It is further required that cogenerators and small power producers be exempt from state utility regulation. Such rules must be established by March 20, 1981.

In order to implement the above provisions of PURPA relating to qualifying cogenerators and small power producers, the Commission will establish rules which regulate rates for selling and purchasing of electric power between qualifying small power producers and cogenerators and electric public utilities, and will define the parameters of the

jurisdiction of this Commission over such qualifying facilities. The cogeneration and small power production rules as proposed by the Commission are attached to this Notice of Rulemaking and are marked as Appendix "A".

The rules attached as Appendix A are proposals only. Such proposed rules, or any specific portion thereof may be modified in accordance with any testimony and evidence received in this proceeding. Each proposed rule may be deleted and altered after consideration by the Commission.

The Commission will hereinafter order that any interested person, firm or corporation may file a petition to intervene, or other appropriate pleading, to become a party to this proceeding and that any such interested person, firm or corporation may file written objections, suggestions or proposed modifications to the proposed rules as contained in attached Appendix "A". Additionally, all electric utilities within the State of Colorado, and subject to the jurisdiction of this Commission shall file the following information in writing with the Commission on or before November 3, 1980:

1. The estimated avoided cost on the electric utility's system, solely with respect to the energy component, for various levels of purchases from qualifying facilities. Such levels of purchases shall be stated in blocks of not more than 100 megawatts for systems with peak demand of 1,000 megawatts or more, and in blocks equivalent to not more than 10% of the system peak demand for systems of less than 1,000 megawatts. The avoided costs shall be stated on a cents per kilowatt hour basis during daily and seasonal peak and offpeak periods, by year, for the current calendar year and each of the next five years;

2. The electric utility's plan for the addition of capacity by amount and type, for purchases of firm energy and capacity, and for capacity retirements for each year during the succeeding ten years; and

3. The estimated capacity costs at completion of the planned capacity additions and planned capacity firm purchases on the basis of dollars per kilowatt, and the associated energy costs of each unit, expressed in cents per kilowatt hour. These costs shall be expressed in terms of individual generating units and of individual planned firm purchases; and

4. Any recommendation for proposed standards of operations for cogenerators and small power plant producers concerning system reliability and safety; and

5. Each electric utility which is legally obligated to obtain all its requirements for electrical energy or capacity from another electric utility shall provide to the Commission data of and from its supplying utility and the sales at which it currently purchases said energy and capacity.

The Commission shall herein enter an order establishing hearing dates and other procedural and filing dates. At the time of such hearing, the Commission shall consider all written submissions, objections, suggestions or proposed modifications to the proposed (Appendix A) rules and will allow such to be presented orally, unless deemed unnecessary.

An appropriate order will be entered.

O R D E R

THE COMMISSION ORDERS THAT:

1. Hearing upon the proposed cogeneration and small power production rules, as contained in Appendix "A", be, and hereby is, set before the Commission as follows:

DATE: November 24, 1980  
TIME: 10:00 A.M.  
PLACE: 5th Floor Hearing Room  
1525 Sherman Street  
Denver, Colorado 80203

On said date and at said time and location the Commission shall consider all submissions and will determine if oral presentation of any submissions are necessary.

2. Any person, firm or corporation desiring to intervene in or participate as a party in this proceeding shall file his, her or its petition for leave to intervene within 15 days after the effective date of this Order and Notice.

3. Any person, firm or corporation desiring to file any objection, suggestion or modification to the proposed cogeneration and small power production rules as set forth in Appendix "A" shall do so by filing the same in written form in an original and six copies with the Executive Secretary of the Commission on or before November 3, 1980.

4. All electric public utilities will file the following information with the Commission for review with these rules:

1. The estimated avoided cost on the electric utility's system, solely with respect to the energy component, for various levels of purchases from qualifying facilities. Such levels of purchases shall be stated in blocks of not more than 100 megawatts for systems with peak demand of 1,000 megawatts or more, and in blocks equivalent to not more than 10% of the system peak demand for systems of less than 1,000 megawatts. The avoided costs shall be stated on a cents per kilowatt hour basis during daily and seasonal peak and offpeak periods, by year, for the current calendar year and each of the next five years;

2. The electric utility's plan for the addition of capacity by amount and type, for purchases of firm energy and capacity, and for capacity retirements for each year during the succeeding ten years; and

3. The estimated capacity costs at completion of the planned capacity additions and planned capacity firm purchases on the basis of dollars per kilowatt, and the associated energy costs of each unit, expressed in cents per kilowatt hour. These costs shall be expressed in terms of individual generating units and of individual planned firm purchases; and

4. Any recommendation for proposed standards of operations for cogenerators and small power plant producers concerning system reliability and safety; and

5. Each electric utility which is legally obligated to obtain all its requirements for electrical energy or capacity from another electric utility shall provide to the Commission data of and from its supplying utility and the sales at which it currently purchases said energy and capacity.

This Order shall be effective forthwith.

DONE IN OPEN MEETING the 23rd day of September, 1980.

THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF COLORADO

Ernest S. Miller

Daniel E. Ince

L. Duane Woodard  
Commissioners



APPENDIX A

PROPOSED RULES OF THE PUBLIC UTILITIES COMMISSION  
IMPLEMENTING SECTION 201 AND 210 PURPA, REGARDING SMALL POWER PRODUCTION  
AND COGENERATION FACILITIES, AND ESTABLISHING RATES AND RULES THEREFORE

I. Definitions

- A. The definitions contained herein are the same as those adopted by the Federal Energy Regulatory Commission ("FERC") in its regulations pursuant to Sections 201 and 210 of the Public Utility Regulatory Policies Act of 1978 ("PURPA") with regard to small power production facilities and cogeneration facilities.
- B. "Qualifying facility" is any qualifying small power facility or cogeneration facility as defined in Section 201 of PURPA.
- 1) A qualifying small power production facility is defined as:
- a facility whose power production capacity is owned by one person at one location;
  - a facility whose production capacity is less than 80 megawatts; and
  - a facility which derives more than 50% of its energy input from biomass, wastes, renewable resources or any combination thereof, but with less than 25% of its total energy being derived from oil, natural gas and/or coal.
- 2) A qualifying cogeneration facility is defined as a facility which produces electrical or other forms of useful thermal energy for industrial, commercial, heating or cooling purposes through the sequential use of energy. In order for such facility to qualify, such facility must meet the efficiency criteria as set forth in Section 201 PURPA, and no more than 50% equity interest therein can be held by an electric utility or its affiliates. Such facility may not be diesel powered. A qualifying facility may not be owned by a person engaged primarily in the generation or sale of electrical power.
- C. "Purchase" means the purchase of electric energy or capacity or both from a qualifying facility by an electric utility.
- D. "Sale" means the sale of electric energy or capacity or both by an electric utility to a qualifying facility.
- E. "System emergency" means a condition on a utility's system which is likely to result in imminent significant disruption of service to customers or is imminently likely to endanger life or property.
- F. "Rate" means any price, rate, charge, or classification made demanded, observed or received with respect to the sale or purchase of electric energy or capacity, or any rule, regulation, or practice respecting any such rate, charge or classification, and any contract pertaining to the sale or purchase of electric energy or capacity.
- G. "Avoided costs" means the incremental costs to an electric utility of electric energy or capacity or both which, but for the purchase from the qualifying facility or qualifying facilities, such utility would generate itself or purchase from another source.

- H. "Interconnection costs" means the reasonable costs of connection, switching, metering, transmission, distribution, safety provisions and administrative costs incurred by the electric utility directly related to the installation and maintenance of the physical facilities necessary to permit interconnected operations with a qualifying facility, to the extent such costs are in excess of the corresponding costs which the electric utility would have incurred if it had not engaged in interconnected operations, but instead generated an equivalent amount of electric energy itself or purchased an equivalent amount of electric energy or capacity from other sources.

Interconnection costs do not include any costs included in the calculation of avoided costs.

- I. "Supplementary power" means electric energy or capacity supplied by an electric utility, regularly used by a qualifying facility in addition to that which the qualifying facility generates itself.
- J. "Backup power" means electric energy or capacity supplied by an electric utility to replace energy ordinarily generated by a qualifying facility's own generation equipment during an unscheduled outage of the qualifying facility.
- K. "Interruptible power" means electric energy or capacity supplied by an electric utility subject to interruption by the electric utility under specified conditions.
- L. "Maintenance power" means electric energy or capacity supplied by an electric utility to a qualifying facility during scheduled outages of the qualifying facility.

## II. Rates For Purchase and Sale of Electric Energy and Capacity by Utilities From and to Qualifying Facilities

- A. Each electric utility shall file tariffs with the Public Utilities Commission that set forth rates the utility shall pay to any qualifying facility for the purchase of electric energy and capacity from any qualifying facility. Each electric utility shall file said tariffs on or before January 1, 1981, and such rates for energy and capacity set forth in said tariffs shall be based upon:

- 1) Avoided costs to the utility at the time of delivery of such energy;  
or
- 2) Avoided costs to the utility calculated at the time the obligation to purchase said energy or capacity is incurred.

### Alternative For Avoided Cost Purchase Price

- 1A) Each electric utility shall file tariffs with the Public Utilities Commission and set forth therein the rates that it shall pay to any qualifying facility for the purchase of electric energy or capacity from any qualifying facility. Each electric utility shall file such tariffs on or before January 1, 1981, which tariffs shall set forth rates for both electric energy and capacity. The rates contained in said tariffs shall be based upon avoided costs to the appropriate utility and such avoided costs shall be determined based upon the factors as set forth below.

- 3) The tariffs provided for herein shall additionally set forth rates for the sale of power by each utility to qualifying facilities for supplementary, backup, interruptible, and maintenance power. Such rates shall be established as no more than the rates as charged to other retail customers of the utility receiving such services. Furthermore, the tariffs provided for herein shall set forth rates for the sale of power in excess of that consumed by any qualifying facility at a rate no more than the wholesale power cost thereof, or at a rate which equals the sum of the cost of fuel, operation and maintenance costs of the utility, whichever is less.
- B. Factors to be considered by each utility in determining avoided costs as above provided, include:
- 1) The availability of power from qualifying facilities at utility system daily and seasonal peak periods, including:
    - ability of the utility to dispatch the energy available of the qualifying facility;
    - expected or demonstrated reliability of the qualifying facility;
    - terms of the contract;
    - extent to which scheduled outages of the qualifying utility can be fully coordinated;
    - usefulness during system emergencies, including the ability of the qualifying facility to separate its load from its generation;
    - individual and aggregate value of energy, and capacity of qualifying facilities on the utility's system;
    - the smaller capacity increments and shorter lead times available with additions of capacity from qualifying facilities.
  - 2) The relationship of energy or capacity available from the qualifying facility to the ability of the utility to avoid costs, including deferral of capacity addition and reduction of fossil fuel use; and,
  - 3) The costs or savings resulting from variations and line losses.

### III. Cost and Payment of Interconnection of Qualifying Facilities with Utility

- A. Each electric utility shall make interconnections with any qualifying facility necessary to accomplish purchases and sales. Each qualifying facility shall be obligated to pay interconnection costs prescribed by the electric utility in its tariff therefore. The interconnection costs shall be fair, reasonable and nondiscriminatory. Each utility shall prescribe in its tariff a reasonable, fair and nondiscriminatory installment payment plan for any such interconnection. If interconnection costs of the qualifying facility are: 1) less than \$1,000, payments shall be permitted in a minimum of 3 monthly installments, 2) less than \$10,000, payments shall be permitted in a minimum of 12 monthly installments, or 3) more than \$10,000, payment shall be permitted in a minimum of 24 monthly installments.



- B. Each qualifying facility shall notify the appropriate electric utility, of the initial energizing and startup test of the qualifying utility's generating equipment. The appropriate electric utility shall have the right to be present at such test. Notice of such initial energizing and startup test shall be given by each qualifying facility to the appropriate utility at a reasonable time prior to such event. No qualifying facility shall operate in conjunction with an electric utility until reasonable safety standards and devices, as required by the electric utility, have been established. The required safety standards and devices may include locks and seals, breakers, automatic synchronizers and disconnecting devices. In the event of disagreement between the qualifying facility and the electric utility regarding the reasonableness of utility required safety equipment and standards, either party may file an application for resolution of said disagreement with the Public Utilities Commission. In the event of such filing, the Commission, after hearing, shall establish the safety equipment and standards that shall be purchased, owned, maintained, and installed by the qualifying facility and electric utility prior to joint operation of the appropriate utility and any qualifying facility.
- C. Each electric utility shall have a disconnection device, which device shall have the capability of isolating the energy generated by each qualifying facility's generation. Such device(s) shall be accessible to the appropriate electric utility, and said utility shall also have the right to operate such device whenever necessary, in the judgment of the utility, to maintain safe operating conditions, and whenever the qualifying facility's operations adversely effect the electric utility's system. The appropriate utility shall notify any qualifying facility of proposed, impending, or immediate disconnection, prior to such disconnection, if possible. The reasons for such disconnection shall be briefly stated by such utility.
- D. Each Colorado electric utility shall supply, own, and maintain all meters and associated equipment necessary to independently measure the total generation of each qualifying facility independently from customer loads, for purposes of billing. The qualifying facility shall supply, at no expense to the appropriate utility, a suitable location for installation of meters and associated equipment used for such independent measurement, billing, and load research.
- E. During any utility system emergency, as set forth in paragraph I(E), Definitions, an electric utility may discontinue:
- 1) Purchases from a qualifying facility if continuance of such purchases would contribute to the emergency; and
  - 2) Sales to a qualifying facility provided that discontinuances are on a nondiscriminatory basis and if continuance of such sales would contribute to the emergency.
- F. Whenever an electric utility ceases to purchase from a qualifying facility, the electric utility shall, prior to such temporary stoppage of purchases, notify the qualifying facility in writing, setting forth the reasons therefore. However, in the circumstance of emergency, as defined in I. E. Definitions above, such prior written notice shall not be required, and such written notification shall be given by the appropriate utility to the qualifying facility within a reasonable period of time after the stoppage of such purchases.



- G. Whenever an emergency condition exists, as defined in paragraph I. E. Definitions above, notification will be made in a manner reasonably calculated to protect the interests of the public.

#### IV. Miscellaneous

- A. All Colorado electric utilities with total retail sales exceeding 500 million kilowatt hours during any calendar year beginning after December 31, 1975, and before the immediately proceeding year, shall file the below set forth information with the Public Utilities Commission on or before November 3, 1980. Those Colorado electric utilities with total retail sales during any calendar year, beginning December 31, 1975, and before the immediately proceeding year, which exceed 500 million kilowatt hours, but with less than 1 billion kilowatt hours, shall file the below set forth information on or before June 30, 1982. The reporting requirements set forth herein, shall be respectively required before November 3, 1980 and June 30, 1982 and at each two year interval thereafter. The above required information to be filed by Colorado electric utilities with the Commission is:
- 1) The estimated costs which are, have been and will be avoided by the respective electric utility system, solely with respect to said utility's energy component, as the consequence of the purchasing of energy and capacity from qualifying facilities. These levels are to be stated in blocks of 100 megawatts for systems with peak demand equal to 1,000 megawatts or more; and for those systems with peak demands of less than 1,000 megawatts, these levels are to be stated in blocks not exceeding 10% of the systems peak; said costs must be stated in a cents per kilowatt hour basis during daily and seasonal peak and offpeak periods, for the current calendar year and each of the next five years;
  - 2) The capacity addition plan of each said utility, such plan shall contain the number and type of plant planned for addition, the plan for purchase of firm energy and capacity, the plan for capacity, and the planned capacity retirements of each utility for the next ten years;
  - 3) The estimated capacity costs, completion of planned capacity addition, planned capacity firm purchases on a dollar per kilowatt hour basis, and the associated energy costs of each planned unit stated in cents per kilowatt hour;
  - 4) Any utility recommendation for proposed standards of operation for cogenerators and small power plant producers concerning system reliability and safety.
- B. Each electric utility which is legally obligated to obtain all of its requirements for electrical energy or capacity from another electric utility, or each electric which does obtain all of its requirements for electric energy or capacity from another electric utility shall provide to the Public Utilities Commission data of and from its supplying utility, as above required, along with the rates at which it currently purchases such energy and capacity.

- C. Each appropriate electric utility shall provide to any qualifying facility upon request:
- 1) Supplementary power,
  - 2) Backup power,
  - 3) Maintenance power, and
  - 4) Interruptible power.
- D. The Commission may waive the requirements of Rule C only after public hearing wherein the electrical utility must establish either:
- 1) That the electric utility's ability to render adequate service to its customers will be impaired by the sale of any or all of the above types of power; or
  - 2) That the electric utility will be unduly burdened by providing any or all of the power listed in Rule C to the qualifying facility.