BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF COLORADO

IN THE MATTER OF THE RULES OF THE)
PUBLIC UTILITIES COMMISSION OF THE)
STATE OF COLORADO REGULATING RATES)
AND SERVICE OF COGENERATORS AND)
SMALL POWER PRODUCERS.

CASE NO. 5970

DECISION OF THE COMMISSION UPON EXCEPTIONS

January 12, 1982

APPEARANCES:

John J. Conway, Esq.,
Denver, Colorado;
David L. Roberts, Esq.,
Fort Morgan, Colorado;
and Randolph W. Starr, Esq.,
Loveland, Colorado;
For Colorado Rural Electric Assn.,
and the Colorado Members of Tri-State
Generation and Transmission;

Richard Fanyo, Esq.,
Denver, Colorado,
For CF&I Steel Corporation;

John Garland, Esq., Englewood, Colorado; For Intermountain Rural Electric Assn.;

Robert T. James, Esq., Colorado Springs, Colorado, For Mountain View Electric Assn., Inc.;

William H. McEwan, Esq.,
Denver, Colorado,
Gregory L. Johnson, Esq.,
For the City of Colorado Springs
Department of Public Utilities;

John McNeill, Esq.
Montrose, Colorado,
For Colorado-Ute Electric Association;

Jerold L. Schmidt, Esq.,
Denver, Colorado;
For the Wind Star Foundation;

William T. Smith, Jr., Esq., Boulder, Colorado; For the City of Aspen and Pitkin County and the City of Northglenn, Colorado; James K. Tarpey, Esq., and James R. McCotter, Esq. Denver, Colorado; For Public Service Company of Colorado;

Steven Thompson, Esq., and Jeffrey Pearson, Esq., Denver, Colorado; For Colorado Solar Energy Assn.;

Barbara Chambliss,
Denver, Colorado;
For the State of Colorado
Water Conservation Board
and the Office of Energy
Conservation;

JoAnn Deighan, Bill Franklin, and Beth Whittier, Esq. Eagle, Colorado; For Eagle County, Colorado;

K. A. Grobe, Pueblo, Colorado; For Southern Colorado Power Company;

Marilyn Hardy and Donald Hardy Golden, Colorado; For Pan Aero Corporation;

Bob Keller, Boulder, Colorado; For Mountain Valley Energy, Inc.;

Ray Traudt,
Englewood, Colorado;
For Analytics, Inc.;

STATEMENT

BY THE COMMISSION:

On November 9, 1978, President Carter signed into law five Congressional Acts comprising what has commonly been called, collectively, the "National Energy Act." One of these acts, The Public Utility Regulatory Policies Act of 1978 (Public Law 695-617, 16 U.S.C. 2601 et seq., hereinafter referred to as PURPA) deals with a number of regulatory matters involving electric energy, natural gas, hydroelectric power, and crude oil transportation. Section 201 of PURPA defines certain cogeneration and small power production facilities (hereinafter "qualifying facilities") which, pursuant to Section 210 of PURPA qualify for special rates and terms for the purchase and sale of electric power between utilities and qualifying utilities.

Section 210(2) of PURPA also provides that the Federal Energy Regulatory Commission (FERC), not later than one year after the date of enactment of PURPA shall prescribe, and from time to time thereafter revise, such rules as it determines necessary to encourage cogeneration and small power production which rules require electric utilities to offer to --

- (1) sell electric energy to qualifying facilities, and
- (2) purchase electric energy from qualifying facilities.

Section 210 (f) of PURPA provides that within 1 year after the FERC rule is prescribed, or revised, each state regulatory authority shall, after notice and opportunity for public hearing, implement such FERC rule (or revised rule) for each electric utility for which it has ratemaking authority. Section 210(a) of PURPA also mandates that the FERC rule shall provide provisions respecting minimum reliability of qualifying facilities (including the reliability for emergencies).

Three of the key sections of Section 210 of PURPA are set forth in their entirety as follows:

- "(b) RATES FOR PURCHASES BY ELECTRIC UTILITIES. -- The Rules prescribed under subsection (a) shall insure that, in requiring any electric utility to offer to purchase electric energy from any qualifying cogeneration facility or qualifying small power production facility, the rates for such purchase --
- (1) shall be just and reasonable to the electric consumers of the electric utility and in the public interest, and
- (2) shall not discriminate against qualifying cogenerators or qualifying small power producers.

No such rule prescribed under subsection (a) shall provide for a rate which exceeds the incremental cost of the electric utility of alternative electric energy.

- (c) RATES FOR SALES BY UTILITIES. -- The rules prescribed under subsection (a) shall insure that, in requiring any electric utility to offer to sell electric energy to any qualifying cogeneration facility or qualifying small power production facility, the rates for such sale --
- shall be just and reasonable and in the public interest, and
 shall not discriminate against the qualifying cogenerators or qualifying small power producers.
- (d) DEFINITION. -- For purposes of this section, the term "incremental cost of alternative electric energy" means, with respect to electric energy purchased from a qualifying cogenerator or qualifying small power producer, the cost to the electric utility of the electric energy which, but for the purchase from such cogenerator or small power producer, such utility would generate or purchase from another source."

To implement Sections 201 and 210 of PURPA this Commission issued

Decision No. C80-1846, in Case 5970 on September 23, 1980 (hereinafter

Decision No. C80-1846). Decision No. C80-1846 initiated Colorado rulemaking

proceedings with respect to cogeneration and small power producers. Proposed

small power producer and cogenerator rules (hereinafter "Proposed Rules")

were attached to Decision No. C80-1846, and marked as "Appendix A." The

ordering portion of Decision No. C80-1846 established November 24, 1980 as

the hearing date on the proposed rules. Paragraph 4 of the order of Decision

No. C80-1846 required all electric utilities to file with the Commission

defined data regarding their respective estimated avoided costs on their

respective electric systems by November 3, 1980.

Decision No. C80-1846 also provided that any person, firm or corporation desiring to intervene or participate as a party in Case No. 5970 should file a petition for leave to intervene within 15 days after the effective date of the order and notice (September 23, 1980).

The following parties were granted leave to intervene:

Union Rural Electric Association, Inc. Pan Aero Corporation The City of Fort Morgan Morgan County Rural Electric Association Colorado-Ute Electric Association, Inc. Colorado Association of Municipal Utilities Colorado Rural Electric Association C80-1959 San Luis Valley Rural Electric Cooperative, Inc. Poudre Valley Rural Electric Association, Inc. City of Colorado Springs Department of Public Utilities Cathedral Bluffs Shale Oil Company C F & I Steel Corporation Intermountain Rural Electric Association Public Service Company of Colorado C80-1981 White River Electric Association, Inc. Ray F. Traudt (Analytics, Inc.) Mountain View Electric Association, Inc. C80-1982 Black Mountain Spruce, Inc. City of Aspen ("Aspen") Board of Pitkin County Commissioners ("Pitkin") City of Northglenn C80-2019 Eagle County Resource Recovery Project C80-2060 Colorado Energy Advocacy Office The Windstar Foundation Empire Electric Association, Inc. C80-2104

C80-2162

Decision No. C80-1846 also provided that any person, firm or corporation desiring to file any objection, suggestion or modification to the Proposed Rules should file the same in written form with the Commission on or before November 3, 1980.

Colorado Solar Energy Association

Statements, objections, suggestions, modifications and comments, etc., were filed by the following:

Analytics, Inc. Black Mountain Spruce, Inc. Board of Eagle County Commissioners Carbon Power & Light, Inc. (Motion to be exempt from proceedings). Cathedral Bluffs Shale Oil Company Central Telephone & Utilities Corporation CF&I Steel Corporation City of Aspen City of Fort Morgan City of La Junta City of Northglenn Colorado Association of Municipal Utilities Colorado Small Shale Oil Hydroelectric Coordinator Colorado Solar Energy Association Colorado-Ute Electric Association, Inc. County of Pitkin Empire Electric Association, Inc. Grand Valley Rural Power Lines, Inc. Highline Electric Association Intermountain Rural Electric Association K. C. Electric Association, Inc. McCall, Ellingson & Morrill, Inc. Morgan County Rural Electric Association Mountain Parks Electric, Inc. Mountain View Electric Association, Inc. Pan Aero Corporation Poudre Valley Rural Electric Association Public Service Company of Colorado San Isabel Electric Association, Inc. San Luis Valley Rural Electric Coop., Inc. Tri-State Generation and Transmission Association, Inc. (Colorado Members) Union Rural Electric Association White River Electric Association Y-W Electric Association, Inc.

Hearings were held before Michael R. Homyak, the examiner duly assigned by law to the matter, on November 24, 1980.

The following individuals testified at the hearing;

Girts Krumins Alan Merson Hethie Parmesano Philip S. Stern Harry Davitian Bob Keller Robert McGregor JoAnn Deighan Ray Traudt Barbara Chambliss

During the course of the hearing no exhibits were offered by any party.

At the comencement of the hearing the Wind Star Foundation filed a motion requesting a later date for the required filing of avoided cost data by the utilities. The motion was granted to the extent that the utilities were ordered to file all existing small power producer and cogenerator

contracts, the methodology used to calculate the avoided cost data previously filed, and data pertaining to fuel purchase contracts. All such data was to be filed by the utilities within ten (10) days of the close of hearing. By Interim Decision No. R80-2323, Colorado-Ute Electric Association was granted an extension of time to file the additional data until December 8, 1980.

The hearing concluded on November 24, 1980, and all parties were granted leave to file post hearing statements of position by December 15, 1980. This time was extended to December 22, 1980 by Interim Decision No. R80-2268.

Posthearing statements of position were filed by the following:

Analytics, Inc.
Colorado Association of Municipal Utilities
Colorado Members of Tri-State Gerneration &
Transmission Association, Inc.
Mountain View Electric Association, Inc.
Cathedral Bluffs Shale Oil Co.

The additional data required to be filed by the various utilities was filed as required. Public Service Company of Colorado and City of Colorado Springs Department of Public Utilities were otherwise required by Section 133 of PURPA to file certain cost and demand load curve data with the Commission by November 1, 1980. Administrative notice was taken of the Section 133 PURPA data, and such was made part of the record of this proceeding. At the conclusion of the hearing the matter was taken under advisement.

On May 6, 1981, Hearings Examiner Michael R. Homyak issued his recommended Decision No. R81-801, which decision basically,

- (1) established rules,
- (2) set forth a methodology for determining avoided costs, and

(3) established avoided cost purchase rates for each Colorado jurisdictional utility.

Numerous requests for extensions of time within which to file exceptions came before the Commission. In response thereto, the Commission extended the time within which to file exceptions to Recommended Decision No. R81-801 to and including July 27, 1981.

Exceptions, or the equivalent of exceptions, were filed by the following:

City of Colorado Springs David Corbin Intermountain Rural Electric Association White River Electric Association Mountain View Electric Association Colorado-Ute Electric Association Colorado Solar Energy Association Public Service Company of Colorado Home Light and Power Company C F & I Steel Corporation City of Aspen Board of Pitkin County Commissioners Colorado Members of Tri-State Generation and Transmission Association, Inc. Colorado Energy Advocacy Office Colorado Association of Municipal Utilities

The Commission has now examined the record in this case, including the Recommended Decision of the Examiner, together with the various statements of position (or equivalents) filed at various times during these proceedings and the exceptions (or equivalents) filed subsequent to the entry of the Recommended Decision of the Examiner.

The Commission has decided to enter its own decision herein, without regard to the Recommended Decision of the Examiner.

FINDINGS OF FACT

I. <u>Introductory Remarks</u>

In Recommended Decision No. R81-801, dated May 6, 1981,
Hearings Examiner Michael R. Homyak recommended: (1) establishment
of small power production and cogeneration rules, (2) establishment of
a specific methodology for the determination of "avoided costs", and
(3) establishment of utility specific avoided cost rates that each Colorado
jurisdictional utility shall pay to small power producers and cogenerators
for energy and capacity. The Commission has determined that it is appropriate
in this case, at the present time, to adopt small power production and
cogeneration rules, but that it is not appropriate to set forth or adopt
a specific methodology for determining avoided costs nor is it appropriate
to adopt utility specific avoided cost rates for Colorado jurisdictional
utilities who purchase energy and capacity from small power producers and
cogenerators.

We further believe that it is appropriate at this time to require Colorado jurisdictional utilities to establish standard avoided cost rates for small power producers and cogenerators whose size, in terms of capacity, is 100 kilowatts (KW) or less. With regard to small power producers and cogenerators whose capacity size is over 100 KW, it is our view that the most appropriate approach with regard to purchases of energy and capacity is for small power producers and cogenerators with capacity in excess of 100 KW to negotiate with Colorado jurisdictional utilities and to enter into contracts for the sale and purchase of electric energy and capacity. Each such contract shall be filed with this Commission at least thirty (30) days prior to the proposed effective date thereof. Each such contract specifically shall set forth therein the avoided cost methodology of the utility. The Commission may set a proposed contract for hearing and suspend the effective date thereof.

In the event small power producer or cogenerator with capacity in excess of 100 KW and the jurisdictional utility reach an impasse as to the appropriate contract provisions in regard either to avoided cost rates or other matters, resolution of the impasse may be effected through the normal complaint mechanisms presently provided for by the Colorado Public Utility Law and the Rules of Practice and Procedure of the Commission

The Commission reminds the Colorado utilities subject to the above, that one of the overriding purposes of \$5 201 & 210 of PURPA is to foster and encourage small power production and cogeneration. Therefore, the avoided cost rate established by said contracts should be derived and computed in accordance with the avoided cost and incremenal costs concepts as set forth in \$5 201 & 210 of PURPA. Further, such rates should also be just and reasonable to the consumer of the utilities, and not discriminate against qualifying facilities.

In determining whether to allow the above filed contracts to become effective, or to be suspended, the Commission will carefully determine if such, in the view of the Commission, comply with the above criteria.

The rules as adopted herein by the Commission reflect, in part, some of the positions taken by the various parties in their exceptions to the recommended decision of the Examiner. To the extent that the particular recommendation or exception is not adopted or granted herein, the Commission states and finds that such recommendation or exception does not merit adoption at this time.

For ease of reference, we have decided to modify the numerology of the small power production and cogenerator rules by using a decimal numbering system. Also, for ease of reference, the rules attached to this decision are set forth in "legislative" form so that the parties easily may compare them to those proposed by the Examiner.

II. Purpose of Rules

Section 210 of PURPA provides the statutory framework whereby the FERC is to prescribe, and from time to time thereafter revise, such rules as it determines necessary to encourage cogeneration and small power production. As indicated above, in accordance with that mandate, the FERC, on February 25, 1980, issued final rules implementing Section 210 of PURPA effective March 2, 1980. In turn, this Commission was required by Section 210 (f) of PURPA to implement such rules or revised rules as prescribed by FERC for each electric utility for which it has ratemaking authority (sometimes described as a "jurisdictional" utility).

It should also be noted that Section 210 of PURPA provides that the FERC rules are also to include provisions respecting minimum reliability of qualifying facilities (including the reliability of such facilities during emergencies) and rules respecting reliability of electric energy service to be available to such facilities from electric utilities during emergencies. The FERC rules may authorize a qualifying facility to make any sales for purposes other than resale.

It is clear that the fundamental purpose of Section 210 of PURPA is to encourage small power production and cogeneration. However, it is also clear that utilities are not required by PURPA to guarantee the success of small power production or cogeneration facilities. In this latter connection it must be recognized that the rate for purchase by an electric

utility for electric energy from a qualifying facility normally may not exceed the incremental cost to the utility for alternative electric energy. Section 210 (d) defines the incremental cost of alternative electric energy as the costs to the electric utility of the electric energy which, but for purchase from a qualifying facility, such utility would generate or purchase from another source. In implementing Section 210 of PURPA the FERC has defined "avoided costs" as follows:

"'Avoided cost' 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." § 292.101 (b) (6). (Emphasis supplied.)

Section 292.304 (a) of the FERC rules tracks the language of Section 210 (6) of PURPA and states:

"(a) Rates for purchases. (1) Rates for purchases shall: (i) be just and reasonable to the electric consumer of the electric utility and in the public interest; and (ii) not discriminate against qualifying congeneration and small power production facilities.

Although utilities are obligated by PURPA to pay avoided cost rates to qualifying facilities for power, the avoided cost rate may not exceed the amount that it would cost the utility to generate or otherwise purchase such power from other sources. In other words, the consumers of electric utilities are not required by PURPA to unduly finance small power production or cogeneration. The Colorado rules (Attachment 1) have been drawn with the intent of encouraging small power production, but not at the undue expense of any utility, nor its consumers.

III. Discussion of Final Rules

Rule 1.000 - Definitions

Section 292.101 FERC Rules sets forth 11 definitions which range from qualifying facility to maintenance power. Section 292.202 FERC Rules states 13 definitions from biomass to energy input. Colorado Rule 1.000, in large measure, reiterates the definitions contained in the aforementioned FERC Rules. It is intended that Colorado Rule 1.000 follow the above FERC definitions. To the extent that Section 292.202 FERC Rule definitions are not repeated in the Colorado Rules, such definitions are incorporated by reference therein. It is intended that those FERC Rule definitions not repeated, but incorporated by reference, are to be included in Colorado Rule 1.000 without modification.

Rule 2.000 - Qualifying Facility

Paragraphs 2.201, 2.202, 2.203, 2.204 and 2.205 of Colorado Rule 2.000 set forth certain general requirements and criteria which are as follows: qualification of qualifying facilities, criteria of small power production and cogeneration facilities, ownership criteria, and procedures for obtaining qualifying status. These Rules are intended to follow Sections 292.202, 203, 204, 205, 206, and 207, FERC Rules, which establish the same requirements and criteria. However, the Commission will modify the FERC ownership test. Rule II.2.D, as orginally recommended by the Examiner duplicates FERC Rule \$ 292.206.* FERC Rule \$ 292.206 and the Examiner Rule II.2.D. apparently presumes that a small power production facility is owned by a person primarily engaged in the generation or sale of electric power "if more than 50% of the equity interest in the facility is held by an electric utility..."

Section 201 of PURPA may include municipalities within the term "electric utility" by defining the latter as "a person or state agency which sells electric energy; . . . " Moreover, a municipality which owns its own utility system may be presumed to be a person primarily engaged in the

^{*} The corresponding rule in this decision is Rule 2.204

generation or sale of electric power although in fact this may not be the case. Where a municipality generates and sells, or purchases wholesale electric power and then resells electricity on a limited basis as merely one of many services to its citizens, it might be argued that the municipality is an "electric utility." However, it does not follow that a municipality as above described is primarily engaged in the sale of electricity. Thus, we agree with Aspen that it is appropriate to narrow the scope of the ownership test so as to include in that provision only those utilities primarily engaged in the generation or sale of electricity. Accordingly, we shall deviate from the FERC Rule by changing the first sentence in the ownership test to read:

For purposes of this Rule, a small power production facility shall be considered to be owned by a person primarily engaged in the generation or sale of electric power, if more than 50% of the equity interest in the facility is held by one or more electric utilities, any one of which is primarily engaged in the generation or sale of electric power, or by a public utility holding company, or companies, or any combination thereof . . .

3. Rule 3.000 - Arrangements Between Electric Utilities and Qualifying Cogeneration and Small Power Production Facilities

The scope of Colorado Rule 3.000 is the same as subpart c, part 292 FERC Rules where it is stated at Section 292.301(a):

"Applicability. This subpart applies to the regulation of sales and purchases between qualifying facilities and electric utilities."

Colorado Rule 3.000 deals with the following topics:

Negotiated rates or terms

Availability of electric utility system cost data

Electric utility obligations

Rates for and factors affecting purchases

Rates for sales

Periods when purchases not required

Interconnection costs

System emergencies

The above topics are also covered by subpart c of FERC Rule 292. Colorado Rule 3.200 provides that any qualifying facility and electric utility may enter into a contract for the purchase and sale of power and energy, notwithstanding other provisions of the rules. Nothing contained in the Colorado rules is intended to limit the parties from agreeing to the sale or purchase of power on terms which differ from the requirements of the Colorado rules. The proposed rules accompanying Commission Decision C80-1846 omitted any reference to the right of parties to contract independently of the Colorado rules. Much comment was received in regard to such omission, and in response it is found that qualifying facilities with capacity in excess of 100 KW and utilities should be free to strike their own bargain as to rates for purchases of energy and/or capacity, subject only to the review of any such contract by the Commission as provided in Rule 5.300.

Rule 3.301 requires utilities with total sales exceeding 500 million kilowatt-hours during any calendar year beginning after

December 31, 1975, and before the immediately preceding calendar year, to file data from which avoided costs may be derived, not later than November 1, 1980, and again on May 31, 1982, and not less often than every two years thereafter. Rule 3.302 allows those utilities having less than one billion kilowatt-hours of sales during any calendar year beginning after December 31, 1975, and before the immediately preceding year, to first file the required avoided cost data on May 31, 1982, and

no less often than every two years thereafter. Thus, electric utilities having sales exceeding 500 million kilowatt-hours, and less than one billion kilowatt-hours for the relevant time period, need not file the avoided cost data until May 31, 1982, and not less often than every two years thereafter. Utilities having total sales, for the applicable period of time, of one billion kilowatt-hours or more must file avoided cost data on November 1, 1980, again on May 31, 1982, and not less often than every two years thereafter.

The Commission Order and Notice initiating rulemaking proceedings, Decision No. C80-1846 ordered <u>all</u> electric utilities to file defined avoided cost data with the Commission on or before November 3, 1980. With the exceptions noted below, such data was timely filed. In such fashion, the initial data filing requirements of Rule 3.301 and 3.302 have been met by Colorado electric utilities.

Rule 3.3031, 3.3032 and 3.3033 outline the specific data which must be filed by Colorado utilities. Special filing rules for small electric utilities having total sales of energy, not exceeding 500 million kilowatt-hours during the applicable time period, are established by Rule 3.304. Such rules follow 5 292.302 et. seq. FERC Rules.

Each Colorado electric utility is required by Rule 3.400 to purchase energy and capacity of qualifying facilities at the utility's avoided cost; sell energy and capacity to qualifying facilities at non-discriminatory rates; allow qualifying facilities to interconnect with the utility; transmit energy to any other electric utility on agreement of the transmitting utility and qualifying facility; and operate in parallel with qualifying facilities.

The utility obligations established by Colorado Rule 3.400 are intended to duplicate the electric utility obligations set forth in § 292.303 FERC Rules. Numerous Colorado Rural Electric Associations (REA's) and municipal distribution utilities having no generating capability, purchase their entire energy requirements from other generating and transmission utilities. Such distribution utilities have contracts with their wholesale supplying utilities which contain covenants which require the distribution utility to purchase all of its power requirements from the wholesale utility. It was herein stated that the above so-called "all requirements" covenant, is necessary to maintain the financial integrity of the wholesale utility. It was also stated that to require a distribution utility subject to an all requirements covenant to purchase from qualifying facilities would violate the all-requirements provision of the wholesale-distribution utility contract.

Notwithstanding the all requirements covenant contained in Colorado wholesale distribution utility contracts, Rule 3.401 requires each electric utility to purchase any energy and capacity which is made available to it from a qualifying facility. Rule 3.403 also requires any electric utility to interconnect with any qualifying facility in order to accomplish purchases or sales. Rule 3.404 allows the transmission of energy to a utility, which would not otherwise be obligated to purchase such energy or capacity, only upon the agreement of both the qualifying facility and transmitting utility. Hence, the final rules require distribution utilities to purchase power from qualifying facilities, even though they are subject to an all requirements covenant.

In order to clarify the above, reference is made to the FERC Rule analysis of Section 292.303(d) at Federal Register (FR) Vol. 45, No. 38, page 12219, wherein the comparable FERC Rules are discussed:

"\$ 292.303(d) Transmission to other electric utilities-allrequirement contracts. Several commenters noted that the obligation to purchase from qualifying facilities under this Section might conflict with contractual commitments into which they had entered requiring them to purchase all of their requirements from a wholesale supplier. One commenter noted that, with regard to all-requirements rural electric cooperatives, any impairment of the obligation to obtain all of a cooperative's requirements from a generation and transmission cooperative might affect the financing ability of the generation and transmission cooperative. The Commission observes that, in general, if it permitted such contractual provisions to override the obligation to purchase from qualifying facilities, these contractual devices might be used to hinder the development of cogeneration and small power production.

The Commission believes that the mandate of PURPA to encourage cogeneration and small power production requires that obligations to purchase under this provision supercede contractual restriction on a utility's ability to obtain energy or capacity from a qualifying facility.

The Commission has, however, provided an alternate means by which any electric utility can meet this obligation. Under paragraph (d) if the qualifying facility consents, an all-requirements utility which would otherwise be obligated to purchase energy or capacity from the qualifying facility would be permitted to transmit the energy or capacity to its supplying utility. In most instances, this transaction would actually take the form of the displacement of energy or capacity that would have been provided under the all-requirements obligation. In this case, the supplying utility is deemed to have made the purchase and, as a result the all-requirements obligation is not affected.

In addition, if compliance with the purchase obligation would impose a special hardship on an all-requirements customer, the Commission may consider waiving such purchase obligation pursuant to the procedure set forth in 292.402."

In the circumstance of a distribution utility subject to an all-requirements covenant, the qualifying facility and distribution utility may agree to transmit qualifying facility power to the generating utility. By transmitting qualifying facility power to the wholesale utility, the sale will be to the wholesaler and not the distributor. Moreover, the qualifying facility power "transmitted" to the wholesale utility may usually displace power purchased by the distribution utility from its wholesaler. In this way, the all-requirements obligation between wholesale and distribution utilities should not be affected. However, should this situation create hardship, the utility may apply for a waiver of this obligation pursuant to

Colorado Rule 5.400. In any such waiver proceeding the burden shall be on the utility to establish hardship and the necessity for waiver. Also, in any such waiver hearing, the Commission will expect the utility to establish appropriate and cost effective wheeling arrangements, whereby those small power producers and cogenerators located in the affected service area can transmit their power and capacity to other utilities.

Rule 3.500 establishes criteria for purchase rates for energy and capacity from qualifying facilities. Section 210(b) PURPA, Rates for Purchases by Electric Utilities, states:

"Rates for Purchases By Electric Utilities. The rules prescribed under subsection (a) shall
insure that in requiring any electric utility to
offer to purchase electric energy from any qualifying cogeneration facility or qualifying small
power production facility, the rates for such purchase -

- (1) shall be just and reasonable to the electric consumers of the electric utility and in the public interest, and
- (2) shall not discriminate against qualifying cogenerators or qualifying small power producers.

No such rule prescribed under subsection (a) shall provide for a rate which exceeds the incremental cost to the electric utility of alternative electric energy."

Section 292.304 (b) (2) FERC Rules, implementing the above cited Section of PURPA states:

"Subject to paragraph (b)(3) of this section, a rate for purchases satisfies the requirements of paragraph (a) of this section if the rate equals the avoided costs determined after consideration of the factors set forth in paragraph (a) of this section"

Section 292.101 (6) <u>Definitions</u>, FERC Rules states:

"'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."

Colorado Rule 3.401 and 3.402 follows the incremental avoided cost principles set forth above in PURPA and implementing FERC Rules.

Section 210 of PURPA limits the amount a utility pays to purchase qualifying facility energy or capacity to the utility's incremental avoided cost. By contrast, the avoided cost rate satisfies the requirements of FERC Rule 292.304(b)(2) if such rate equals the utilities avoided costs. Hence, it is clear that the avoided cost purchase rate required by PURPA and FERC Rules for capacity and energy is no more, nor less than the marginal cost the utility avoids by purchasing energy and/or capacity from qualifying facilities.

Colorado Rule 3.504 requires that avoided costs are to be computed after consideration of the factors outlined in Rule 3.600. Such factors are utility provided data, availability of capacity, and line losses. With the exceptions noted in Attachment 2, all Colorado Jurisdictional Utilities have filed avoided cost data in accordance with ordering paragraph 4 of Decision C80-1846. By this avoided cost data each utility has stated the incremental cost of energy and capacity that it believes it will avoid by purchasing power and energy from small power producers and cogenerators.

Rule 3.700 deals with periods when purchases are not required. We have not specified a particular minimum hourly notification requirement as we believe Colorado's utilities should not be required to provide notice for one class of purchasers, such as qualified facilities, which notice is not otherwise applicable to other categories of customers.

Rates for sales from utilities to qualifying facilities of supplementary, back-up, maintenance and interruptible power are addressed in Rule 3.802. The intent of this Rule is that qualifying facilities be treated like other customers of the utility with similar load or other

cost-related characteristics, for purposes of sales of power. Moreover, it is not intended, for example, that an industrial cogenerator receive power at a residential rate, nor that a residential small power producer be charged commercial rates.

Rule 3.803 gives utilities the opportunity to request waiver from the requirement to provide supplementary, back-up, maintenance and interruptible power to qualifying facilities. Such requests will be carefully reviewed by the Commission and granted only in those circumstances where fully warranted. While the Commission intends to encourage small power production and cogeneration, such may not be accomplished at the undue expense of Colorado utilities and their ratepayers. In any waiver proceeding the Commission will attempt to strike a balance between the above two polarities.

The rules proposed by Decision C80-1846 suggested an installment payment plan for the cost of interconnection. Numerous comments from utilities were received to the general effect that installment payment of interconnection costs should not be authorized. The non-utility parties to this proceeding favored the proposed installment payment plan, but suggested a maximum higher than that provided by the proposed rules.

Final Rule 3.903 contains an installment payment arrangement, whereby qualifying facilities may pay the cost of interconnection in monthly installments. The final rule, as contrasted with the proposed rule, provides that the utility may charge interest on the unpaid balance of the cost of interconnection, and may examine the credit-worthiness of the qualifying facility before extending credit. Rule 3.904 authorizes the utility and qualifying facility to agree to an installment payment plan which differs from that provided by Rule 3.903.

Such agreed installment payment plan may vary as to term and equality of monthly installments. However, the parties may not agree to a rate of interest different from that established by Rule 3.905.

The final rules retain the concept of payment of interconnection costs by installment payments in order to encourage small power production and cogeneration. Without an installment payment provision many small power production and cogeneration projects would be unable to obtain financing and would therefore never come to fruition. On the other hand, to meet many well-grounded concerns of the utilities regarding payment of interconnection costs by installments, the provision of interest, examination of credit-worthiness of facilities, and an agreed installment payment plan have been added to the final rules. It is also mentioned that any qualifying facility who does not received utility approval for the payment of interconnection costs by installment payments, may make an appropriate filing with the Commission pursuant to Rule 4.152 and 4.153.

The obligation of a qualifying facility to provide energy or capacity to a utility during system emergency is addressed in Rule 3.950. In compliance with the procedures established by FERC Rules, the Colorado Rule only requires a qualifying facility to provide energy or capacity to a utility in a system emergency to the extent as provided by agreement between the parties, or as ordered by Section 202(c) of the Federal Power Act. No qualifying facility is required, in a system emergency, to provide power or capacity in excess of that previously agreed to be delivered to the utility by the facility. However, should any qualifying facility voluntarily elect, in times of system emergency, to provide energy or capacity to a utility in excess of that previously agreed upon, such energy or capacity would likely be more valuable than other qualifying facility power. The Commission expects that any such additional voluntary emergency qualifying facility power and capacity, would be appropriately priced by the utility.

The rule regarding discontinuance of purchases and sales to a qualifying facility in system emergencies is set forth at Rule 3.9520. Disconnection notification procedures are set forth in Rule 3.953. It is intended by Rule 3.950 that the utility shall contact any qualifying facility by telephone prior to discontinuance. However, a situation can be envisioned where discontinuance must be immediate. In such circumstance prior telephone communication could be impossible. If prior discontinuance notice by telephone is impossible for a utility to provide, notice must be given to the qualifying facility no later than two hours after the termination of the emergency.

Rule 3.954, clarifies that notification in writing and by telephone is required prior to other temporary discontinuance, when such discontinuances can reasonably be anticipated to be 16 minutes or more in duration. Numerous comments to the proposed notification rule were received. Generally, the comments suggested that utility notification to qualifying facilities in every discontinuance situation, no matter how momentary, would place a difficult administrative burden upon the utilities. Such comments are found to be correct, and Rule 3.954 has thus been added.

4. Rule 4.000 - Standards for Operating Reliablity

The standards for operating reliability are set forth in Rule 4.000. It is hoped that "small" qualifying facilities of 25 kw capability or less, will be able to establish interconnected operations with a minimum of cost and administrative requirements. The above reason prompted the statement in Rule 4.050:

[&]quot;. . . utilities should require, consistent with safety, the minimum number of standards and quality of facility compliance with such standards by qualifying facilities with 25 kw capacity or less."

The standards for operating reliability direct proposed qualifying facilities to file design information with the utility as the initial step in establishing interconnected operations. Subsequent to the filing step, the rules require the utility and qualifying facility to confer with respect to all phases of proposed interconnection. As numerous commenters pointed out, for small power production and cogeneration to succeed, it is essential that the utilities and qualifying facilities freely and openly consult with each other. To state the obvious, it is clear that open and ongoing communication between the parties will materially foster small power production and cogeneration in the State of Colorado. For the above reason Rule 4.103 conference has been added to the final rules. Such rule requires a conference at the earliest time possible between the utility and qualifying facility, but does not require further utility or facility conferences. However, it is expected and hoped that the parties will confer on an ongoing and frequent basis regarding all appropriate matters herein.

Rule 4.100 establishes 150 days from the filing of design information with the utility, as the minimum time within which a qualifying facility can commence interconnected operations. However, Rule 4.104 allows an agreed early interconnection date. For small power production and cogeneration facilities of 25 kw or less, it is anticipated that interconnected operations may normally begin sooner than 150 days from the filing of design information with the utility.

Rule 4.152 authorizes either party to file an application with the Commission for resolution of a disagreement regarding any requirement of the Rules. It is important to note that this rule is not restricted to disagreements regarding a specific section of the rules, but authorizes the filing of an application for the resolution of a disagreement regarding any requirement of the rules.

Accordingly, Rule 4.152 has been established as the vehicle by which a party may bring any dispute regarding these rules to the attention of the Commission. A qualifying facility or a utility may file an application with the Commission for resolution of any dispute regarding these rules under Rule 4.152, and by following the Commission's Rules of Practice and Procedure and any applicable statute.

Rules 4.200 through 4.706 set forth the safety requirements which must be met by qualifying facilities prior to interconnection. As mentioned, the minimum requirements which must be met by qualifying facilities of 25 kw or less, should be applied by utilities to such "small" facilities. However, the Commission is also concerned with safe interconnected operations. Therefore, all qualifying facilities, regardless of size, should be aware that certain facility safety standards will apply to them, and must be met prior to the commencement of interconnected operations.

Rule 4.750 establishes the procedure for commencement of interconnected operations. This Rule sets no limit on the number of times that a qualifying facility may request inspection and start-up testing of their generating equipment. A qualifying facility may, without limitation, continue to seek utility certification to commence interconnected operations until it achieves such status. Should any utility determine that qualifying facility certification requests have become burdensome or inappropriate, or should a qualifying facility believe that it has been unfairly denied certification, such party may file an application regarding the disagreement pursuant to Rule 4.152.

The proposed rules accompanying Decision C80-1846 required utilities to supply, own, and maintain all meters to measure the generation of each qualifying facility independent from load. The general response of the utilities to this rule was that both the cost

of meters and maintenance should be a qualifying facility cost. In support of such position the utilities referred, <u>inter alia</u>, to Section 292.304, (a) (ii), <u>rates for purchases</u>, FERC Rules, which states:

". . . (1) rates for purchases shall: (i) <u>be just and reasonable to the electric consumer of the electric utility and in the public interest;

. . . " (emphasis added)</u>

After consideration of the above matter, Rule 4.800 now provides that utilities shall supply and maintain meters at cost, but that such cost shall be a qualifying facility cost. However, the cost of meters may be payable by the qualifying facility as a cost of interconnection, while the maintenance of meters shall be paid by the qualifying facility as incurred.

Each qualifying facility is required by Rule 4.850 to file a maintenance schedule prior to interconnected operations. An inspection procedure is established by Rule 4.8511 to insure that scheduled maintenance is performed, and that protective equipment properly operates. From inspection, should the utility determine that the qualifying facility has not complied with its maintenance schedule, or is engaging in operational practices which must be modified or terminated, the utility may give the qualifying facility a thirty day notice of disconnection. The qualifying facility may then correct the practice which gave rise to the notice within the thirty day period. Rule 4.8516 authorizes the parties to agree to a reasonable continuance of disconnection, if the qualifying facility is making bona fide efforts to perform specified maintenance, or modify or stop the specified operational practices. A continuance of disconnection should, in most situations, be for no longer than a six month period of time. Only in unusual circumstances would a continuance of disconnection for longer than six months beyond the original thirty day time period be considered reasonable.

Comments were received which suggested that rules should be established regarding indemnification of utilities and qualifying facilities for damage to third persons. This comment is appropriate and therefore the final rules contain an indemnification provision in Rule 4.850. Comments were also received which suggested that a hold harmless provision should be established for damages to the facilities of either the utility or qualifying facility by the other party. Rule 4.900 requires the utility and qualifying facility to hold each other harmless for such damage.

5. Rule 5.000 - Exemption of Qualifying Facilities from Certain Colorado Laws and Regulations, and Waivers

In accordance with Sections 201 and 210 of PURPA, and Section 292.602 FERC Rules, qualifying cogeneration and small power production facilities are exempt from Colorado laws or regulations regarding rates of electric utilities, and financial and organizational regulation of electric utilities. Colorado Rule 5.101 and 5.102 restates the above exemptions. However, Rule 5.200 provides that qualifying facilities are not exempt from the provisions of the Colorado small power production and cogeneration rules, nor from any rule or regulation implementing the rules.

Rule 5.300 clarifies that this Commission would only be divested of its authority to review utility contracts in those circumstances where such review would be contrary to the provisions of Sections 201 and 210 of PURPA, or FERC implementing Rules. This Commission otherwise retains its jurisdiction to review all utility contracts.

Section 292.403 <u>Waivers</u>, FERC Rules, provides that after notice, any electric utility may request waiver from the provisions of the FERC Rules. Colorado Rule 5.400 likewise provides a mechanism for

utility requests for waivers from any of the requirements of these rules. However, a utility may not obtain a waiver from the requirements of Rule 3.300, availability of utility system cost data. In any Rule 5.400 waiver proceeding, the burden of establishing the elements necessary to obtain waiver will be upon the utility. The Commission will grant such waivers only when fully warranted by the evidence.

To clarify the philosophy of the Commission regarding Cogeneration and Small Power Production, the attached final rules (Attachment 1) should not be viewed as if set in stone. This Commission views its obligation to encourage small power production and cogeneration as a continuing obligation. From the nature of the hearings and submissions in this matter, it is clear that many of the issues regarding small power production and cogeneration are only now beginning to emerge. In particular, appropriate avoided cost purchase rates, and standards of operating reliability now appear to be developing concepts, and may require further consideration and refinement.

In accordance with the above views, it is the intention of the Commission to monitor the results of the implementation of the attached final small power production and cogeneration rules (Attachment 1). At that point in time, which is now estimated to be six to nine months from the effective date of the final rules, the record of this proceeding may be reopened for the reception of additional evidence regarding any area of concern.

III

CONCLUSIONS ON FINDINGS OF FACT

Based upon the foregoing Findings of Fact, the following conclusions are drawn:

- 1. Attachment 1 to this Decision and Order, being Public Utility Commission rules implementing Sections 201 and 210, PURPA, should be adopted by order as the final small power production and cogeneration rules, as required by Sections 201 and 210, PURPA.
- 2. All jurisdictional Colorado utilities should be ordered to file tariffs implementing the final small power production and cogeneration rules, Attachment 1 to this Decision and Order.

ORDER

THE COMMISSION ORDERS THAT:

- 1. Attachment 1 to this Decision and Order, Colorado
 Public Utility Commission rules implementing Sections 201 and 210,
 PURPA, small power production and cogeneration facilities, be, and
 hereby is, incorporated by reference as if set forth verbatim herein.
- 2. Attachment 1, Colorado Public Utility Commission Rules implementing Sections 201 and 210, PURPA, small power production and cogeneration facilities, be, and hereby is, adopted as the final Colorado small power production and cogeneration rules.
- 3. Attachment 1, Public Utility Commission rules implementing Sections 201 and 210, PURPA, small power production and cogeneration facilities, shall be submitted by the Executive Secretary of the Public Utilities Commission to the Legislative Drafting Office of the Colorado General Assembly, in the form and manner prescribed by the Committee on legal services, for review and opinion of the Staff of the Committee on legal services, to determine whether the Colorado Final Small Power Producer and Cogenerator Rules (Attachment 1) are

within the rulemaking authority of the Public Utilities Commission, and for later review by the Committee on legal services for its opinion as to whether said Rules, adopted herein, conforms with Section 24-4-103 (8)(a), CRS, 1973.

- 4. An opinion of the Attorney General of the State of Colorado will be sought regarding the constitutionality and legality of the proposed rules as set forth in Attachment 1 herein.
- 5. The Executive Secretary of the Commission shall file with the Office of the Secretary of State of the State of Colorado, for publication in the Colorado Register, a copy of the aforementioned rules and, when obtained, a copy of the opinion of the Attorney General of the State of Colorado regarding the constitutionality and legality of the same.
- 6. Attachment 1, Public Utility Commission rules implementing Sections 201 and 210, PURPA, small power production and cogeneration facilities as adopted pursuant to ordering paragraph 1 above, shall become effective on the twentieth (20th) day after publication of the same in the Rules Register of the Secretary of State of the State of Colorado.
- 7. Each Colorado jurisdictional utility, as set forth in this ordering paragraph, shall file tariffs which shall set forth standard rates for qualifying facilities of 100 KW or less, together with the avoided cost methodology utilized by said utility to determine the same. Such tariffs shall be filed within thirty (30) days of the effective date of this decision implementing the provisions of the small power production and cogeneration rules (Attachment 1 hereto). The said tariffs as filed in

pursuance of this ordering paragraph shall set forth an effective date which shall be no earlier than thirty days, nor later than sixty days, from the date of filing. Said tariffs shall be subject to the applicable provisions of 40-6-111, CRS 1973, as amended.

The Colorado jurisdictional utilities are:

A. Municipal Utilities

- Colorado Springs, City of
- 2. Estes Park, Town of
- 3. Fort Morgan, City of
- 4. Fountain, Town of
- 5. Glenwood Springs, City of
- 6. Granada, Town of
- 7. Gunnison, City of
- 8. Holly, Town of
- 9. La Junta, City of
- 10. Lamar, City of
- 11. Las Animas Light and Power

B. Rural Electric Associations

- 1. Carbon Power and Light
- 2. Delta-Montrose Electric Association
- 3. Empire Electric Association, Inc.
- '4. Grand Valley Rural Power Lines, Inc.
- 5. Gunnison County Electric Association, Inc.
- 6. Holy Cross Electric Association, Inc.
- 7. Intermountain Rural Electric Association
- 8. La Plata Electric Association, Inc.
- 9. Moon Lake Electric Association, Inc.
- 10. San Isabel Electric Association, Inc.
- 11. San Luis Valley Rural Electric Cooperative, Inc.
- 12. San Miguel Power Association, Inc.
- 13. Sangre De Cristo Electric Association, Inc.
- 14. Southeast Colorado Power Association
- 15. Springer Electric Cooperative, Inc.
- 16. Tri-County Electric Cooperative, Inc.
- 17. Wheatland Electric Cooperative, Inc.
- 18. White River Electric Association, Inc.
- 19. Yampa Valley Electric Association, Inc.

C. Investor-Owned Electric Utilities

- 1. Central Telephone and Utilities Corporation (Southern Colorado Power Company)
- 2. Home Light and Power Company
- 3. Public Service Company of Colorado
- 8. With respect to the filing of the tariffs ordered herein by ordering paragraph 7, each utility shall also file its avoided cost rates and the methodology utilized by said utility to determine the same.

- 9. Exceptions filed by the various parties herein are granted to the extent the same are consistent with the decision and order herein and in all other respects said exceptions be, and hereby are, denied.
- 10. This Decision and Order shall become effective on February 1, 1982, and each party herein, at its option, may file appropriate pleadings requesting rehearing, reconsideration or reargument on or before February 1, 1982.

DONE IN OPEN MEETING the 12th day of January, 1982.

THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF COLORADO

5 mine

Commissionons

TABLE OF CONTENTS

							rage
- I -	1.000	Def	initions	5			1
		-1:	1.001	Gen	eral :	Statement	1
		-2-	1.200	Gen	eral	Definitions	1
				-A-	1.20	1 Biomass	1
				-B-	1.20	2 <u>W</u> aste	1
	. •			-e .	1.20	3 Purchase	1
				-B÷	1.20	4 Sale .	1
				-E .	1.20	5 System Emergency	1
				-F:	1.20	6 Rate	1
				-6-	1.20	7 Avoided Costs	2
F. \$1.				-H-	1.20	8 Interconnection Costs .	2
				-1-	1.20	9 Supplementary Power	2
1. 14 194 : . 194				-9-	1.21	O Backup-Power	2
				-K-	1.21	1 Interruptible Power	2
				-t:	1.21	2 Maintenance Power	2
				-M -	1.21	3 General Definitions	3
- ii :	2.000	Qua	lifying	Faci	lity		3
		-1-	2.100	Ger	neral	Definition	3
		-2-	2.200	Qua	llifyi	ng Small Power Production Facility	3
	`			-A .	2.20	1 Maximum Size Criteria	3
				-B .	2.20	2 Fuel Use Criteria	4
				-e .	2.20	3 Ownership Criteria	4
				-B-	2.20	4 Ownership Test	4
ii e	•			-E .	2.20	5 Exceptions	5
	-	-3 .	2.300	Coge	enerat	ion Facility	5
	e			-A-	2.30	1 General Definition	5
				-B -	2.30	2 Topping-Cycle	5
	- Santana			-e .	2.30	3 Bottoming-Cycle	5

					<u>Page</u>	
•	-4-	2.400 Qual	ifying Co	ogeneration Facility	6	
		-A:	2.401	Operating and Efficiency Standards	6	
		-B .	2.402	Ownership Criteria	6	
•. .:		-6:	2.403	Ownership Test	6	
		-B-	2.404	Exceptions	6	
8		-E .	2.405	Interim Exclusion	7	
	-5 .	2.500 Proc	edures fo	or Obtaining Qualifying Status	7	
		-A:	2.501	Qualification	7	
		-B .	2.502	Information to be Filed	7	
N.		-e .	2.503	Additional Small Power Information	8	
		-B .	2.504	Additional Cogeneration Information	8	
i i		-E .	2.505	Optional FERC Certification	8	
		-F .	2.506	Notice Requirements Facilities 500 Kw	9	
		-6-	2.507	Revocation of Qualifying Status	9	
		-H .	2.508	Substantial Modification of Qualifying Facility	9	
-##-				ectric Utilities and Qualifying Power Production Facilities	9	
	-1-	3.100 General Statement 3.200 Negotiated Rates				
	-2-					
	-3 .	3.300 Avai	lability	of Utility System Cost Data	10	
		-A -	3.301	Data of Certain Utilities	10	
		-B .	3.302	Data of Other Utilities	10	
kalen Tag		-6-	3.303	Data to be Made Available	10	
	·	-8-	3.304	Special Rules for Small Utilities	11	
	-4-	3.400 Elec	tric Uti	lity Obligations	12	
		-A -	3.401	Purchases from Qualifying Facilities	12	
		-B .	3.402	Sales to Qualifying Facilities	12	
		-e .	3.403	Obligation to Interconnect	12	
		-8-	3.404	Transmission to Other Utilities	13	
ndan. Cod		-F-	3 405	Parallel Operation	13	

				<u>Page</u>	
-5 .	3.500 Rates for Purchases				
	-A . 3.5		Utility Rates for Purchases	13	
	-B .	3.502	Pay Avoided Costs	14	
	-e .	3.503	New Capacity	14	
	-B .	3.504	Factors to be Considered	14	
	-E:	3.505	Old Capacity	14	
	-F .	3.506	Rates for New Capacity	14	
	-6 .	3.507	Rates over Contract Term	14	
	-H .	3.508	Standard Rates	15	
	-1-	3.509	Standard Rates May Vary	15	
	- 3.	3.510	Avoided Costs for Contracts	15	
	-K .	3.511	Adjustment of Energy Costs	15	
-6 .	3.600 Fact	16			
	` -A-	3.601	Data	16	
	-B .	3.602	Availability of Capacity or Energy	16	
	-e .	3.603	Relationship of Energy and Capacity to Avoided Costs	17	
	-B-	3.604	Line Losses	17	
-7 .	3.700 Periods when Purchases not Required				
	-A .	3.701	Excessive Costs	17	
	-B .	3.702	Notice	17	
	-e .	3.703	Failure to Give Notice	18	
	-B .	3.704	Verification	18	
-8-	3.800 Rates for Sales				
	-A .	3.801	Reasonable Sales Rates	18	
	-B-	3.802	Power to be Provided	19	
	-e .	3.803	Waiver	19	
	-8-	3.804	Different Rate ·	19	
	-E .	3.805	Rates for Backup and Maintenance Power	19	

					<u>Page</u>
	-9:	3.900 Inte	rconnecti	on Costs	20
		-A .	3.901	Payment of Interconnection Costs	20
		-B .	3.902	Fair Interconnection Costs	20
		-6:	3.903	Installment Payments	20
		-B .	3.904	Agreed Payment Plan	21
		-E:	3.905	Interest	21
		-F .	3.906	Other Interconnection Costs	21
		-6-	3.907	Credit-Worthiness of Facilities	22
	10.	3.950 Syst	em Emerge	ncies	22
:		-A .	3.951	Emergency Energy or Capacity	22
		-B .	3.952	Emergency Disconnection	23
• •		-e :	3.953	Notification	23
·. :		-B .	3.954	Other Discontinuances	23
-1V: 4.000	Stan	dards for 0	perating	Reliability	24
	-1-	4.050 Gene	ral State	ment	24
£ :	-2-	4.100 Fili	ng of Des	ign Information	24
		-A-	4.101	Sufficient Information	24
		-B-	4.102	Notification	24
다. 하다 11일		-e .	4.103	Conference	25
		-B .	4.104	Early Interconnection Date	25
	-3-	4.150 Comp	liance wi	th Standards	25
		-A .	4.151	No Interconnection until Compliance	25
		-B -	4.152	Disagreement	26
		-6:	4.153	Commission Establishment of Standards	26
수요. 연합 200	-4-	4.200 Code	Certific	ation	26
		-A .	4.201	Obtaining of Certification	26
		-B .	4.202	Certificates at Facility Cost	26
10.4		-6-	4,203	Utility Specification of Codes	26

				Page	
-5 .	-5: 4.250 Limits of Magnitude				
	-A .	4.251	Upper Limits	27	
	-B-	4.252	Request for Moratorium	27	
	-6-	4.253	Sizing Criteria	27	
	8	4.254	Development and Filing of Criteria	27	
-6 .	4.300 Set	Back		28	
	,-A .		Setback-of-Facility-	28	
	-B .	4.301	On Site Inspection	28	
	-e .	4.302	Utility Access	28	
-7:	4.350 Coor	dination	of Circuit Protection Equipment	28	
	-A .	4.351	Examination of Circuit Protection Equipment	28	
	-B .	4.352	Evaluation of Interconnections	29	
	-6-	4.353	Interactions of Facilities and Circuit Protection	29	
	-B .	4.354	Replacement or Recoordination of Utility Equipment	29	
	-E .	4.355	Payment of Recoordination Costs	29	
	-F .	4.356	Facility Detail	30	
-8-	8. 4.400 Potential Effects of Utility Operations on Facilit			30	
	-A .	4.401	Utility Liability	30	
	-B .	4.402	Facility Protection Equipment	30	
	-e .	4.403	Written Advisement	30	
-9-	4.450 Util	ity Resp	onsibility to Provide Quality Service	30	
	-A .	4.451	Quality of Service after Interconnection	30	
	-B .	4.452	Measurement of Service	31	
	-e :	4.453	Establishment of Quality of Service	31	
	-8-	4.454	Cost of Tests	31	
10.	4.500 Grou	ınding of	Facility Equipment	31	
	-A-	4.501	No Interconnection until Compliance	31	
	-B .	4.502	Grounding Practices	31	

					<u>Page</u>
	-6	. 4.	503	Degraded Safety	32
	-B	. 4.	504	Advisement of Grounding Requirements	32
	-E	. 4.	505	Inspection	32
	-F	. 4.	506	Modifications	32
11.	4.550 S	tandar	ds for	Harmonics	33
	-A	. 4.	551	Utility to Establish Standards	33
	B	. 4.	552	On-Site Interference	33
12-	4.600 I	nterco	nnected	Voltage Levels	33
	-A·	. 4.	601	Interconnection at Secondary Levels	33
	-B	. 4.	602	Facility Modifications	33
-13-	4.650 T	ype of	f Genera	tors and Inverting Equipment	34
	-A	. 4.	651	Utility Standards	34
	-B	. 4.	652	Power Factor Standards	34
14.	4.700 System Protection Equipment				34
	-A :	. 4.		Disconnection Equipment Qualifying Facility	34
	-B	. 4.	702	Isolating Devices	35
	-6	. 4.	703	Fused Protection	35
	-B:	. 4.	704	Relaying Equipment	35
	-E:	. 4.	705	Extraordinary Operation of Equipment	36
	-F	. 4.	706	Phasing	36
1 5-	4.750 Notice of Compliance				36
1 6 .	4.800 M	eters			38
	-A	. 4.	801	Supply and Maintenance of Meters	38
	-B	. 4.	802	Location of Meters	38
	-6	. 4.	803	Cost of Meters and Maintenance	38
17:	4.850 M	ainter	nance of	Qualifying Facility	39
	-A	. 4.		Facility to File Maintenance Schedule	39
	-B	. 4.	852	Facility to File Generation Schedule	41
18 .	4.900 I	ndemni	ity		41
19.	4.950 H	old Ha	armless		42

			Page
-∀ 5.		mption of Qualifying Facilities from Certain orado Laws and Regulations, and Waivers	42
	-1:	5.100 Exemption	42
,		-A: 5.101 Rates	42
		-B . 5.102 Other	42
•	-2:	5.200 Exceptions	42
	-3 .	5.300 Contract Review by Commission	42
	-4-	5.400 Utility Waivers	43

•

COLORADO PUBLIC UTILITIES COMMISSION RULES IMPLEMENTING SECTIONS 201 AND 210, PURPA, SMALL POWER PRODUCTION AND COGENERATION FACILITIES

-I: 1.000 Definitions.

-1: 1.100 General Statement.

The following definitions are generally the same as those adopted by the Federal Energy Regulatory Commission (hereinafter "FERC") in its regulations, 18 CFR Part 292. et. seq., ("FERC Rules") pursuant to Sections 201 and 210 of the Public Utility Regulatory Policies Act of 1978 (hereinafter "PURPA"). Such definitions relate to qualifying small power production and cogeneration facilities as established by PURPA and the FERC Rules. The definitions contained in these rules shall have the same meaning as they have under FERC Rules and PURPA unless further defined herein.

-2: 1.200 <u>General Definitions</u>.

- -A: 1.201 "Biomass" means any organic material not derived from fossil fuels.
- -B: 1.202 "Waste" means by-product materials other than biomass.
- -6: 1.203 "Purchase" means the purchase of electric energy or capacity or both from a qualifying facility by an electric utility.
- -B: 1.204 "Sale" means the sale of electric energy or capacity or both by an electric utility to a qualifying facility.
- -E: 1.205 "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.
- -E: 1.206 "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.

- -6: 1.207 "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.
- 1.208 -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, including the costs of installing equipment elsewhere on the utility's system necessitated by the interconnection, 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.
- "Supplementary power" means electric energy or capacity supplied by an electric utility, regularly used by a qualifying facility in addition to that which the facility generates itself.
- -d: 1.210 "Backup-power" means electric energy or capacity supplied by an electric utility to replace energy ordinarily generated by a facility's own generation equipment during an unscheduled outage of the facility.
- -K: 1.211 "Interruptible power" means electric energy or capacity supplied by an electric utility subject to interruption by the electric utility under specified conditions.
- -t: 1.212 "Maintenance power" means electric energy or capacity supplied by an electric utility to a qualifying facility during scheduled outages of the qualifying facility.

General Definitions. The definitions of supplementary firing, useful power output, useful thermal energy output, total energy output, total energy input, natural gas, oil, and energy input measurement, and utility glothermal small power production facility, as set forth in 18 CFR Part 292.

Section 202(f), (g), (h), (i), (j), (k), (1), (m), and (0)(1) and (2) definitions FERC Rules, are adopted by reference and are incorporated into these rules as if set forth verbatim.

-H: 2.000 Qualifying Facility.

-1: 2.100 General Definition.

"Qualifying facility" is any small power production facility or cogeneration facility which is a qualifying facility under Subpart B of 18 CFR 292. Sections 201, 203, 204, 205, and 206 FERC Rules, and Section 201 of PURPA.

-2: 2.200 A qualifying small power production facility is:

-A: 2.201 Maximum size criteria

- -1. 2.2011 A facility where the power production capacity of the facility for which qualification is sought, together with the capacity of any other facilities which use the same energy resource, are owned by the same person, and are located at the same site, may not exceed 80 megawatts.
- -2. 2.2012 For purposes of this Rule, facilities are considered to be located at the same site as the facility for which qualification is sought if they are located within one mile of the facility for which qualification is sought and, for hydroelectric facilities, if they use water from the same impoundment for power generation.
- -3: 2.2013 For purposes of making the determination in sub-paragraph -2- 2,2012, the distance between facilities shall be measured from the electrical generating equipment of a facility.

-4: 2.2014 If any qualifying facility obtains a waiver of-sub-paragraphs-2-and-3-2.2012 AND 2.2013 from the FERC, a copy of such written waiver shall be filed with this Commission within 20 days of receipt of such by the qualifying facility.

-B: 2.202 <u>Fuel use criteria.</u>

A facility whose primary energy source is biomass, waste, renewable resources, glothermal resources, or any combination thereof, and more than 75% of the total energy input is from these sources. The use of oil, natural gas, and coal by the facility may not in the aggregate, exceed 25% of its total energy input during any calendar year.

-2: 2.2022 Any primary energy source which, on the basis of its energy content, is 50% or more biomass shall be considered biomass.

-6: 2.2203 Ownership criteria.

A small power production facility may not be owned by a person primarily engaged in the generation or sale of electric power (other than electric power solely from cogeneration facilities or small power production facilities).

-B- 2.204 Ownership test.

For purposes of this Rule, a small power production facility shall be considered to be owned by a person primarily engaged in the generation or sale of electric power, if more than 50% of the equity interest in the facility is held by an electric utility or utilities, or by a public utility holding company, or companies, or any combination thereof. If a wholly or partially owned subsidiary of an electric utility or public utility holding company has an ownership interest of a facility, the subsidiary's ownership interest shall be considered as ownership by an electric utility or public utility holding company.

-E: 2.205 Exceptions.

For the purpose of this section a company shall not be considered to be an "electric utility" company if it:

- -1: 2.2051 Is a subsidiary of an electric utility holding company which is exempt by rule or order adopted or issued pursuant to Section 3(a)(3) or 3(a)(5) of the Public Utility Holding Company Act of 1935, 15 U.S.C. 79c(a)(3), 79c(a)(5); or
- -2: 2.2052 Is declaired not to be an electric utility company by rule or order of The Securities and Exchange Commission pursuant to section 2(a)(3)(A) of the Public Utility Holding Company Act of 1935, 15 U.S.C. § 79 b (a)(3)(A).

-3. 2.300 A cogeneration facility is:

-A: 2.301 <u>General definition</u>.

"Cogeneration facility" means equipment which is used to produce electric energy and forms of useful thermal energy (such as heat or steam), used for industrial, commercial, heating, or cooling purposes, through the sequential use of energy.

-B: 2.302 Topping-cycle cogeneration facility.

"Topping-cycle cogeneration facility" means a cogeneration facility in which the energy input to the facility is first used to produce useful power output, and the reject heat from power production is then used to provide useful thermal energy.

-6: 2.303 Bottoming-cycle cogeneration facility.

"Bottoming-cycle cogeneration facility" means a cogeneration facility in which the energy input to the system is first applied to a useful thermal energy process, and the reject heat emerging from the process is then used for power production.

-4: 2.400 A qualifying cogeneration facility is:

- -A: 2.401 Operating and efficiency standards for topping and bottoming-cycle facilities
 - -1: 2.4011 Any cogeneration facility must, in order to qualify, meet the applicable operating and efficiency standards specified in 18 CFR Part 292.205 (a) and (b) FERC Rules, and Section 201, PURPA.
 - -2: 2.4012 Sections 292.205 (a) and (b) FERC Rules are incorporated by reference herein as if set forth verbatim.

-B: 2.402 Ownership criteria

A cogeneration facility may not be owned by a person primarily engaged in the generation or sale of electric power (other than electric power solely from cogeneration facilities or small power production facilities).

-6: 2.403 Ownership test

For purposes of this Rule, a cogeneration facility shall be considered to be owned by a person primarily engaged in the generation or sale of electric power, if more than 50% of the equity interest in the facility is held by an electric utility or utilities, or by a public utility holding company, or companies, or any combination thereof. If a wholly or partially owned subsidiary of an electric utility or public utility holding company has an ownership interest of a facility, the subsidiary's ownership interest shall be considered as ownership by an electric utility or public utility holding company.

-B: 2.404 Exceptions

For purposes of this section a company shall not be considered to be an "electric utility" company if it:

-1: 2.4041 Is a subsidiary of an electric utility holding company which is exempt by rule or order adopted or issued pursuant to section 3(a)(3) or (3)(a)(5) of The Public Utility Holding Company Act of 1935, 15 U.S.C. 79c(a)(3), 79c(a)(5);

-2: 2.4042 Is declared not to be an electric utility company by rule or order of the Securities and Exchange Commission pursuant to section 2(a)(3)(A) of The Public Utility Holding Company Act of 1935, 15 U.S.C. § 79 b (a)(3)(A).

-E: 2.405 Interim exclusion

Pending further action by the Federal Energy Regulatory Commission, any cogeneration facility which is a new diesel cogeneration facility may not be a qualifying facility. A new diesel cogeneration facility is a cogeneration facility which derives its useful power output from a diesel engine, the installation of which began on or after March 13, 1980.

-5: 2.500 Procedures for Obtaining Qualifying Status:

-A: 2.501 Qualification

A small power production facility or cogeneration facility which meets the criteria for qualification set forth in Rule--II--1;-2;-A;-B;-6;-B 2.100, 2.200-2.204; and -4;-A;-B;-6;-and-B-2.400-2.404 and Section 292.203 FERC Rules is a qualifying facility.

-B. 2.502 Information to be Filed

The owner or operator of any facility qualifying under these rules shall file the following information with this Commission:

- -1: 2.5021 The name and address of applicant, all owners, and location of the facility;
- -2. 2.5022 A brief description of the facility, including a statement indicating whether such facility is a small power production facility or a cogeneration facility;
- -3: 2.5023 The primary energy source used or to be used by the facility;
- -4: 2.5024 The power production capacity of the facility; and

- -5: 2.5025 The percentage of ownership by any electric utility or by any public utility holding company, or by any person owned by either.
- -6: 2.503 Additional information required from small power production facilities

In addition to the information required in paragraph B, small power production facilities shall file the following additional information with the Commission:

- -1: 2.5031 The location of the facility in relation to any other small power production facilities located within one mile of the facility, owned by the facility which use the same energy source; and
- -2: 2.5032 Information identifying any planned usage of natural gas, oil or coal.
- -B: 2.503 <u>Additional information required from cogeneration facilities</u>

In addition to the information required in paragraph B, cogeneration facilities shall file the following additional information with the Commission:

- -1: 2.5041 A description of the cogeneration system, including whether the facility is a topping or bottoming cycle and sufficient information to determine that any applicable requirements under Section 292.205, FERC regulations, will be met; and
- -2. 2.5042 The date installation of the facility began or will begin.
- -E: 2.505 Optional application for FERC certification
 - -1. 2.5051 Should any small power production or cogeneration facility file an application for FERC certification that the facility is a qualifying facility, such facility shall file a copy of any FERC order granting or denying the application with this Commission 30 days after receipt thereof by the facility.

-2. 2.5052

If no order is issued to such facility within 90 days of the filing of the complete application, this Commission shall be notified thereof by the facility within 120 days of the filing of the complete application.

-F: 2.506 Notice requirements for facilities of 500 kw or more

An electric utility is not required to purchase electric energy from a facility with a design capacity of 500 kw or more until 90 days after the facility notifies the utility that it is a qualifying facility, or 90 days after the facility has applied to the Federal Energy Regulatory Commission for certification that the facility is a qualifying facility pursuant to Section 292.207(b), FERC rules.

-6: 2.507 Revocation of qualifying status

In the event that any qualifying facility, has such status revoked by the FERC, in accordance with Section 292.207(d) FERC Rules, such facility shall notify this Commission within 30 days of receipt of such notification from the FERC.

-H: 2.508 <u>Substantial alteration or modification of qualifying facility</u>

Any small power production or cogeneration facility which applies to the FERC, pursuant to Section 292.207 (d) (2) FERC Rules, for a determination that any proposed alteration or modification will not result in a revocation of qualifying status, shall file the FERC determination of such application with this Commission 30 days after receipt thereof.

-III: 3.000 Arrangements Between Electric Utilities and Qualifying Cogeneration and Small Power Production Facilities

-1: 3.100 General Statement

This Rule applies to the regulation of sales and purchases between qualifying facilities and electric utilities.

-2: 3.200 <u>Negotiated Rates or Terms</u>.

Nothing in this Rule shall limit the authority of any electric utility and any qualifying facility to agree to a rate for any purchase, or terms or conditions relating to any purchase, which differ from the rate or terms or conditions which would otherwise be required by this rule; or affects the validity of any contract entered into between a qualifying facility and an electric utility for any purchase.

-3: 3.300 Availability of Electric Utility System Cost Data.

-A: 3.3001 Data to be Filed and Maintained by Certain Utilities

Except as provided in Rule -III-3-B- 3.302 below, each electric utility, in any calendar year, if the total sales of electric energy by such utility for purposes other than resale exceeded 500 million kilowatt-hours during any calendar year beginning after December 31, 1975, and before the immediately preceding calendar year, shall maintain for public inspection and shall file the data set forth below with the Public Utilities Commission from which avoided costs may be derived, not later than November 1, 1980, May 31, 1982, and not less often than every two years thereafter.

-B: 3.302 <u>Data to be Filed and Maintained by Other Utilities</u>

Each electric utility having total sales of electric energy for purposes other than resale of less than one billion kilowatt-hours during any calendar year beginning after December 31, 1975, and before the immediately preceding year, shall not be subject to the provisions of Rule -III-3-A- 3.301 above until May 31, 1982.

-6. 3.303 Data to be made available

Each electric utility to which Rule III-3-A-and-B 3.301 AND 3.302 applies shall make available data from which avoided costs may be derived, not later than November·1, 1980, May 31, 1982, as appropriate, and not less often than every two years thereafter. Each utility described in Rule--III-3-A-and-B-3.301 AND 3.302 shall file with this Commission, and shall maintain for public inspection on the applicable date(s), the following data:

-1. 3.3031

The estimated avoided costs which are, have been, and will be avoided 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 1000 megawatts or more, and in blocks equivalent to not more than 10% of the system peak demand for systems of less than 1000 megawatts. The avoided costs shall be stated on a cents per kilowatt-hour basis, during daily and seasonal peak and off-peak periods, by year, for the current calendar year and each of the next five years, and on a dollars per kilowatt-hour basis by year for the current calendar year and for each of the next five years;

- -2: 3.3032 The capacity addition plan of each utility by amount and type, for purchases of firm energy and capacity, and for capacity retirements for each year during the succeeding 10 years; and
- -3: 3.3033 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.

-B: 3.304 Special Rules for Small Electric Utilities

-1- 3.3041

Each electric utility not having total sales of electric energy for purposes other than resale exceeding 500 million kilowatt-hours during any calendar year beginning after December 31, 1975, and before the immediately preceding calendar year, shall, upon request of a qualifying facility or-any-bona-fide potential-qualifying-facility; provide data which is comparable to that required by Rule -HH:-3;-6;-1; 2; -and-3 3.303 above, to enable qualifying facilities to estimate the electric utility's avoided costs for the periods described in Rule HH:-3;-6;-1;-2;-and-3- 3.303 above. POTENTIAL QUALIFYING FACILITIES SHALL NOT BE ENTITLED TO OBTAIN QUALIFYING FACILITY SPECIFIC DATES, BUT POTENTIAL QUALIFYING FACILITIES SHALL BE ENTITLED TO OBTAIN UTILITY SYSTEM COST DATA BASICALLY APPLICABLE TO ALL POTENTIAL **OUALIFYING FACILITIES.**

-2-3.3042 Notwithstanding Rule -III-B-1 3.3041 above, each electric utility which is legally obligated to obtain all its requirements for electric energy and capacity from another electric utility, may provide the data of its supplying utility and the rates at which it currently purchases such energy and capacity to enable qualifying facilities to estimate the utility's avoided energy and capacity costs for the periods described in Rule-III-3-6;-1;-2; and-3- 3.303 above.

-3: 3.3043 If any electric utility fails to provide the above information on request of a qualifying facility -or-a-bona-fide potential-qualifying-facility; the qualifying facility -or-bona-fide potential-qualifying-facility-- may apply to this Commission for an order requiring that the information be provided.

-4: 3.3044 The data submitted by an electric utility under this Rule -III 3.000 shall be subject to review by this Commission. In any such review, the electric utility shall have the burden of coming forward with justification for its data.

-4: 3.400 Electric Utility Obligations Under These Rules.

-A: 3.401 Purchases from Qualifying Facilities

Each electric utility shall purchase, in accordance with Rules -##-5;-6;-and-7-3.500, 3.600 AND 3.700 any energy and capacity which is made available, either directly or indirectly in accordance with Rule -##-4-B; 3.404 from a qualifying facility to such utility.

-B: 3.402 Sales to Qualifying Facilities

Each electric utility shall sell to any qualifying facility, an accordance with Rule-III-8, 3.800, any energy and capacity requested by the qualifying facility.

-6: 3.403 Obligation to Interconnect

-1: 3.4031 Subject to Rules III-4-6-2;-III-9-6-and-IV; 3.4032, 3.904 AND 4.000 any electric utility shall interconnect with any qualifying facility as may be necessary to accomplish purchases or sales under these rules. The obligation to pay for interconnection

-2: 3.4032 No electric utility shall be required to interconnect with any qualifying facility if, solely by reason of purchases or sales over the interconnection, the electric utility would become subject to regulation as a public utility under Part II of the Federal Power Act.

-B: 3.404 <u>Transmission to Other Electric Utilities</u>

If a qualifying facility agrees, an electric utility which would otherwise be obligated to purchase energy or capacity from such qualifying facility may transmit the energy or capacity to any other electric utility. Any electric utility to which such energy or capacity is transmitted shall purchase such energy or capacity under this subpart as if the qualifying facility were supplying energy or capacity directly to such electric utility. The rate for purchase by the electric utility to which such energy is transmitted shall be adjusted up or down to reflect line losses pursuant to Rule -HHI-6-B- 3.604-and-shall not-include-any-charges- CHANGES, IF ANY, for transmission SHALL BE SUBJECT TO AGREEMENT BETWEEN THE WHEELING UTILITY AND QUALIFYING FACILITIY.

-E: 3.405 Parallel Operation

- -1: 3.4051 Each electric utility shall offer to operate in parallel with a qualifying facility, provided that the qualifying facility complies with the standards for operating reliability contained in Rule-IV 3.400.
- -2: 3.4052 No qualifying facility shall resell any of the utility energy or capacity provided to it back to the utility. The utility may inspect the qualifying facility in accordance with Rule-IV-I7-A-I- 4.8511 to determine if any such energy or capacity resales are, or have occured.

-5. 3.500 Rates for Purchases

- -A: 3.501 Rates for Purchases from Qualifying Facilities Shall:
 - -1: 3.5011 Be just and reasonable to the electric consumer of the electric utility and in the public interest; and
 - -2. 3.6012 Not discriminate against qualifying cogeneration and small power production facilities.

-B: 3.502 Pay Avoided Costs

Nothing in this rule requires any electric utility to pay more than the avoided costs of energy and capacity, or energy or capacity for purchases from qualifying facilities.

-6: 3.503 New Capacity

For purposes of this rule, "new capacity" means any purchase of capacity from a qualifying facility, construction of which was commenced on or after November 9, 1978.

-B: 3.504 Factors to be Considered

Subject to paragraph-E- 3.505 of this Rule immediately below, a rate for purchases satisfies the requirements of paragraph A-1-and-2 3.5011 AND 3.5012 of this rule if the purchase rate equals the avoided costs determined after consideration of the factors set forth in Rule III-6-3.600.

-E: 3.505 Old Capacity

The rate for purchases from old capacity (construction of which was commenced before November 9, 1978) may not be less than the avoided cost determined after consideration of the factors set forth in paragraph-6-3.600 of this rule.

-F: 3.506 Rates for New Capacity

Rates for purchases from new capacity (construction of which was commenced on or after November 9, 1978) shall be in accordance with paragraph—B 3.504 of this rule, regardless of whether the electric utility making such purchases is simultaneously making sales to the qualifying facility.

-6: 3.507 Rates over Contract Term

In the case in which the rates for purchases are based upon estimates of avoided costs over the specific term of a contract or other legally enforceable obligation, the rates for such purchases do not violate this rule if the rates for such purchases differ from avoided costs at the time of delivery.

-H: 3.508 Standard Rates

Each electric utility shall -put-into-effect FILE standard rates for purchases from qualifying facilities with a design capacity of 100 kilowatts or less. No utility shall be required by any provision of these rules to put into effect standard rates for purchases from qualifying facilities with a design capacity of more than 100 kilowatts.

-I: 3.509 Standard Rates May Vary

The standard rates for purchases under this Rule shall be consistent with paragraphs A-1-and-2; 3.5011 AND 3.5012 and -6- 3.600 of this rule; and may differentiate among qualifying facilities using various technologies on the basis of the supply characteristics of the different technologies.

-d: 3.510 . Avoided Costs for Contracts

Each qualifying facility shall have the option to either provide energy and/or capacity as the qualifying facility determines such energy and/or capacity to be available for such purchases, in which case the rates for such purchases shall be based on the purchasing utility's avoided costs calculated at the time of delivery of such energy and/or capacity; or to provide energy or capacity pursuant to a legally enforceable obligation for the delivery of energy or capacity over a specified term, in which case the rates for such purchases shall, at the option of the qualifying facility exercised prior to the beginning of the specified term, be based on either:

- -1: 3.5101 the avoided costs calculated at the time of delivery; or
- -2: 3.5102 the avoided costs calculated at the time the obligation is incurred.

-K. 3.511 Adjustment of Energy Costs

Energy Costs shall be adjusted as they vary. The utilities shall compute and file such with the Commission on an -a-quarterly ANNUAL basis.

-6: 3.600 <u>Factors Affecting Rates for Purchases</u>

In determining avoided costs, the following factors shall, to the extent practicable, be taken into account:

-A: 3.601 <u>Data</u>

The data provided pursuant to Rule III:-3;-6;-1;-and-2; 3.303 and Rule III:-3;-B;-1;-2;-and-3; 3.304 including any review of such data by this Commission; and

-B: 3.602 <u>Availability of Capacity or Energy</u>

The availability of capacity or energy from a qualifying facility during the system daily and seasonal peak periods, including:

- -1: 3.6021 the ability of the utility to dispatch the qualifying facility;
- -2: 3.6022 the expected or demonstrated reliability of the qualifying facility;
- -3: 3.6023 the terms of any contract or other legally enforceable obligation, including the duration of the obligation, termination notice requirement and sanctions for non-compliance;
- -4: 3.6024 the extent to which scheduled outages of the qualifying facility can be usefully coordinated with scheduled outages of the utility's facilities;
- -5: 3.6025 the usefulness of energy and capacity supplied from a qualifying facility during system emergencies, including its ability to separate its load from its generation;
- -6: 3.6026 the individual and aggregate value of energy and capacity from qualifying facilities on the electric utility's system;
- -7. 3.6027 the smaller capacity increments and the shorter lead times available with additions of capacity from qualifying facilities; and

-6: 3.603 Relationship of Energy and Capacity to Avoided Costs

The relationship of the availability of energy or capacity from the qualifying facility as derived in paragraph 6-B,-1, 2,-3,-4,-5,-6,-and-7 3.602 of this rule, to the ability of the electric utility to avoid costs, including the deferral of capacity additions and the reduction of fossil fuel use; and

-B: 3.604 Line Losses

The costs or savings resulting from variations in line losses from those that would have existed in the absence of purchases from a qualifying facility, if the purchasing electric utility generated an equivalent amount of energy itself or purchased an equivalent amount of electric energy or capacity.

-7: 3.700 Periods during which purchases not required

-A: 3.701 Excessive Costs

Any electric utility which gives notice pursuant to paragraph -B- 3.702 of this rule will not be required to purchase electric energy or capacity during any period during which, due to operational circumstances, purchases from qualifying facilities will result in costs greater than those which the utility would incur if it did not make such purchases, but instead generated an equivalent amount of energy itself.

-B: 3.702 Notice

Any electric utility seeking to invoke paragraph -A- 3.701 of this rule must notify each affected interconnected qualifying facility in sufficient time for the qualifying facility to cease the delivery of energy or capacity to the electric utility. Such notification shall be by telephone and written notification. Telephone notification shall be in advance of the proposed stoppage of purchases. Written notification may be after the cessation of purchases and shall specify the operational circum-

stances which caused the situation described in paragraph -A- 3.701 of this rule.-In-any-event;-telephone-notification-shall-be-given-no-later than-four-(4)-hours-in-advance-of-the-actual-cessation-of-delivery-of-energy or-capacity:--No-utility-shall-cease-purchasing-electric-energy-or-capacity from-a-qualifying-facility-any-sooner than-four-(4)-hours-subsequent-to-the-telephone-notification-to-the qualifying-facility-as-provided-herein:-

-6: 3.703 Failure to Give Notice

Any electric utility which fails to comply with the provisions of paragraph -B- 3.702 of this rule will be required to pay the same rate for the purchase of energy or capacity as would be required had the period described in paragraph -A- 3.701 of this rule not occurred.

-B: 3.704 <u>Verification</u>

A claim by an electric utility that a period as described in paragraph -A- 3.701 of this rule has occurred or will occur is subject to verification by this Commission in a manner as this Commission deems appropriate, either before or after the occurrence.

-8: 3.800 Rates for Sales

-A: 3.801 Reasonable Sales Rates

Rates for sales of power to qualifying facilities by electric utilities shall be just and reasonable and in the public interest, and shall not discriminate against any qualifying facility in comparison to rates for sales to other customers served by the electric utility. Rates for sales which are based on accurate data and consistent systemwide costing principles, or which are no more than rates to non-generating retail customers of the utility, shall not be considered to discriminate against any qualifying facility to the extent that such rates apply to the utility's other customers with similar load or other cost-related characteristics.

-B: 3.802 Power to be Provided

On request of a qualifying facility, each electric utility shall provide:

- -1: 3.8021 supplementary power;
- -2: 3.8022 back-up power;
- -3: 3.8023 maintenance power; and
- -4: 3.8024 interruptible power.

-6: 3.803 Waiver

The Commission may waive any requirement of paragraph -B- 3.802 of this rule if, after notice in the area served by the electric utility and after opportunity for public comment, the electric utility demonstrates and the Commission finds that compliance with such requirement will:

- -1: 3.8031 impair the electric utility's ability to render adequate service to its customers; or
- -2. 3.8032 place an undue burden on the electric utility.

-D: 3.804 Different Rate

If a utility can demonstrate to the Commission that a qualifying facility should receive a different rate from that estabished by these rules, such may be authorized by the Commission. The burden of establishing such different rate shall be on the utility and will only be approved if supported by accurate data to include: consistent systemwide costing principles and other appropriate load and cost data.

-E: 3.805 Rates for sales of back-up and maintenance power

The rate for sales of back-up power or maintenance power shall not be based upon an assumption (unless supported by factual data) that forced outages or other reductions in electric output by all qualifying facilities on an electric utility's system will occur simultaneously, or during the system peak, or both; and

-2: 3.8052 Shall take into account the extent to which scheduled outages of the qualifying facilities can be usefully coordinated with the scheduled outages of the utility's facilities.

-9: 3.900 Interconnection Costs

-A: 3.901 Payment of Interconnection Costs

Each qualifying facility shall be obligated to pay the cost of interconnecting with any electric utility for purchases and sales of power and energy. Each electric utility shall establish:

- -1: 3.9011 to the extent that interconnection costs can be determined prior to interconnection, the cost of interconnection for purchases and/or sales of power and energy; and
- -2: 3.9012 to the extent that interconnection costs cannot be determined in advance of interconnection, the utility shall establish such on a case by case basis.

-B. 3.902 Fair Interconnection Costs

The interconnection costs provided for in this rule shall be fair, reasonable, and shall be nondiscriminatory to each qualifying facility with respect to other customers of the utility with similar load characteristics.

-6: 3.903 Installment Payments

Each utility shall establish a reasonable, fair and nondiscriminatory installment payment plan for the cost of interconnection. If interconnection costs of the qualifying facility are:

-1: 3.9031 less than \$1,000.00, payment shall be permitted in a maximum of three equal monthly installments, the first installment being due and payable to the utility thirty days subsequent to the completion of interconnection, with like payments on each succeeding 30 days;

-2: 3.9032 less than \$10,000.00, payment shall be permitted in a maximum of twelve equal monthly installments, the first installment being due and payable to the utility thirty days subsequent to the completion of interconnection, with like payments on each succeeding 30 days;

-3: 3.9033 less than \$24,000.00, payment shall be permitted in a maximum of twenty-four equal monthly installments, the first installment being due and payable to the utility thirty days subsequent to completion of interconnection, with like payments on each succeeding 30 days; or

-4: 3.9034 more than \$24,000.00, payment shall be permitted in a maximum of sixty equal monthly installments, the first installment being due and payable thirty days subsequent to the completion of interconnection, with like payments on each succeeding 30 days.

-D: 3.904 Agreed Installment Payment Plan

The utility and qualifying facility may agree to an installment payment arrangement for interconnection costs which differs from those provided in this rule, as to term and equality of monthly installments.

-E: 3.905 Interest

Each utility may charge interest on the declining unpaid balance of the cost of interconnection. Such interest charge shall be computed as annual simple interest and shall be no more than the prime rate of interest as established on the last business day of the preceding month of the completion of the interconnection by The First National Bank of Denver Colorado.

-F: 3.906 Other Interconnection Costs

For purposes of these rules, interconnection costs which each qualifying facility shall be obligated to pay shall include the costs specifically identified in -r Rule -IV 4.000.

-6: 3.907 <u>Credit-Worthiness of Facilities</u>

Each utility shall not be required to accept the payment of qualifying facility interconnection costs by installment payments as provided by this rule, unless the qualifying facility has applied to the utility for such arrangement, and has provided sufficient financial data to the utility so that the utility may determine the credit-worthiness of the qualifying facility. Upon receipt of the data by the utility, the utility shall promptly issue a written determination of whether or not the qualifying facility qualifies for the payment of interconnection costs by installment payments.

- -i- 3.9071 If the utility approves the payment of the cost of interconnection by installments, the written determination shall specify the estimated amount to be amortized, the estimated payment schedule, and estimated rate of interest thereon.
- -2: 3.9072 If the utility declines to accept installment payment of interconnection costs, the determination shall specify the credit deficiencies of the qualifying facility. The qualifying facility may apply a second time, but no more, for installment payment, providing whatever additional credit data it deems appropriate.

10. 3.950 System Emergencies

-A: 3.951 Emergency Energy or Capacity

A qualifying facility shall be required to provide energy or capacity to an electric utility during a system emergency as defined in Rule 1-2-E 1.205, only to the extent:

- -1: 3.9511 provided by agreement between such qualifying facility and electric utility; or
- -2: 3.9512 ordered under Section 202(c) of the Federal Power Act.

-B: 3.952 <u>Emergency Disconnection</u>

During any system emergency, as defined by Rule #-2-E- 1.205, an electric utility may discontinue:

- -1: 3.9521 purchases from a qualifying facility if such purchases would contribute to such emergency; and
- -2: 3.9522 sales to a qualifying facility, provided that such discontinuance is on a nondiscriminatory basis.

-6: 3.953 Notification

Any electric utility discontinuing purchases or sales to a qualifying facility shall, if possible, notify the qualifying facility by telephone prior to discontinuance. In any event, written notification shall be provided to the qualifying facility no later than three business days subsequent to the termination of the emergency causing the discontinuance. The written notice shall describe the emergency and duration, and the reasons for the discontinuance. If the utility was unable to give prior telephone notice to the qualifying facility of discontinuance, the utility shall notify the qualifying facility by telephone no later than two hours subsequent to the termination of the emergency.

-B. 3.954 Other Discontinuances

Prior to any other temporary discontinuance of purchases or sales, the utility shall notify the qualifying facility in the manner as set forth in paragraph -E- 3.953 of this rule. However, such notification shall not be required if the discontinuance has been previously agreed upon by the parties, or unless the discontinuance is more than fifteen minutes in length. When discontinuances are fifteen minutes or less, the utility shall provide the information required by paragraph -E- 3.953 of this rule to the qualifying facility only upon written request.

-iV: 4.000 Standards for Operating Reliability

-1: 4.050 General Statement

The following standards are established to insure system safety of interconnected operations. However, utilities should require, consistent with safety, the minimum number of standards and quality of facility compliance with such standards by qualifying facilities with 25 kw capacity or less. This procedure is suggested to facilitate interconnection of such qualifying facilities with a minimum of cost and administration. A conference between utilities and facilities is also required by this rule. The purpose of the conference, aside from imparting information to the facility, is to encourage cooperation between the parties. An open and helpful relationship between facilities and utilities will engender the climate necessary for successful Colorado Small Power Production and Cogeneration.

-2: 4.100 Filing of Design Information

Any person seeking to establish interconnected operations as a qualifying facility
shall file detailed design information of
the proposed facility with the utility to
which the facility proposes to interconnect,
at least 150 days prior to interconnection
(subject to Rule IV-2-B 4.104). In addition
to the design information, the proposed
qualifying facility shall file a copy
of all available manufacturers' literature
for the equipment involved, including
specifications, operating instructions, and
recommendations for installation.

-A: 4.101 Sufficient Information

The design information submitted shall be sufficient to enable the utility to assess the impact of the proposed interconnection on the utility's system, and on the system's expansion and operations plans.

-B: 4.102 Notification

The utility shall notify the proposed qualifying facility within ten TWENTY-FIVE days (OR WITHIN SUCH LONGER PERIOD AS MAY BE AGREED UPON BY THE UTILITY AND THE QUALIFYING FACILITY) of the receipt

of the information, whether such is adequate or whether additional information is required. If additional information is required, such shall be specified in writing to the proposed qualifying facility, and the facility shall promptly submit the additional information.

-6: 4.103 Conference

At the earliest time possible, after filing of the information required by this rule, the utility and proposed qualifying facility shall confer. At a minimum, the utility shall then inform the proposed qualifying facility of all requirements for interconnection including, and not by way of limitation, the requirements of these Rules, the specific electrical and construction codes, sizing criteria, setback distances and physical clearances, protective devices, inspections, grounding practices, harmonic content of output voltage levels, recommended use of induction generators and line-commutated invertors, reliable disconnection equipment, and all other safety equipment and procedures required for interconnection.

-D: 4.104 Early Interconnection Date

At any time after submission of the information required by Rule $\pm \forall -2$ 4.100, the utility and qualifying facility may mutually agree to an interconnection date sooner than 150 days from date of submission of such design information.

-3. 4.150 Compliance with Standards

-A: 4.151 No Interconnection until Compliance

No proposed qualifying facility shall be interconnected with a utility until it has established to the satisfaction of the utility that it complies with and has met the appropriate standards set forth in this rule.

-B- 4.152 Disagreement

In the event of disagreement between the proposed qualifying facility and the utility regarding the necessity of utility-required safety equipment and standards, or any other requirement of these rules, either party may file an application for resolution of the disagreement with this Commission.

-6: 4.153 Commission Establishment of Standards

In the event of a filing under Rule IV-3-B 4.152, the Commission, after hearing shall establish the standards which shall be met by the qualifying facility or utility prior to interconnection of the qualifying facility, or shall enter an order resolving any other dispute regarding these rules.

-4: 4.200 <u>Code Certification</u>

-A: 4.201 Obtaining of Certification

Each prospective qualifying facility shall obtain appropriate certification, and present such to the utility, establishing that it has been constructed in compliance with, and meets all construction and electrical codes governing the quality of materials, construction, and installation thereof.

-B: 4.202 Certificates at Facility Cost

The proposed qualifying facility shall obtain the above required certificates at its own cost.

-6. 4.203 Utility Specification of Codes

The specific codes which the qualifying facility must comply with shall be specified in writing by the utility within ten days of the final receipt of the design information set forth in Rule IV-2- 4.100.

-5: 4.250 <u>Limits of Magnitude of Facilities</u>

-A: 4.251 Upper Limits

Each utility shall establish the practical upper limits of the magnitude of qualifying facility installations suitable for their ITS system. Each utility shall also estimate the potential aggregate effects of the interconnection of all qualifying facilities proposed at any given time, as a safety determination.

-B: 4.252 Request for Moratorium

Should any utility determine that proposed interconnections are creating safety problems, such utility may apply to this Commission for a moratorium upon further interconnection. The burden of establishing such a safety problem shall be upon the utility. Notice of such proceeding shall be given to all qualifying facilities interconnected on the utility's system, and any other known potential qualifying facilities seeking interconnection with the utility.

-6: 4.253 Sizing-Criteria-

Each-utility-shall-also-develop;-from-time-totime;-qualifying-facility-sizing-criteria;-which criteria-shall-vary-depending-upon-the-effectsof-multiple-qualifying-facility-interconnectionsincreasing-in-compound-fashion-on-the-one-hand; and-increasing-in-linear-fashion-on-the-other-hand:

-B: 4.254 Development and Filing of Criteria

The criteria- PRACTICAL UPPER LIMITS and estimates-- AGGREGRATE EFFORTS OF INTERCONNECTION established by the utilities pursuant to this Rule shall be initially developed and filed with the Commission within six months of the effective date of these Rules.

-6: 4.300 <u>Set-Back</u>

-A: Setback-of-Facility-

- -i: No-qualifying-facility-shall-interconnect
 with-any-utility;-unless-all-of-its-equipment
 avoids-setback-distances-and-physical-clearances
 as-established-by-the-applicable-local-code-for-the-type-of-installation-proposed:
- -2: The-utility-shall-advise-the-qualifying facility-of-the-risks-that-the-utility forsees-of-a-qualifying-facility-not complying-with-paragraph-l-above.

-B: 4.301 Onsite Inspection

Each utility may perform an onsite inspection of the proposed location of the qualifying facility prior to construction thereof, to then satisfy itself that minimum setback distances and physical clearances have been established which will assure the safety of utility and qualifying facility equipment. THE COST OF SAID INSPECTION SHALL BE INCLUDED AS A COST OF INTERCONNECTING THE QUALIFYING FACILITY.

-6: 4.302 Utility Access

In the event of failure of utility or qualifying facility equipment causing an interaction between such equipment, utility personnel shall be authorized the reasonable right of access to the qualifying facility's premises to repair, maintain, or retrieve any utility equipment effected by the failure of such equipment.

-7: 4.350 Coordination of circuit protection equipment

-A. 4.351 Examination of Circuit Protection Equipment

Prior to interconnection of any qualifying facility, and at the earliest time possible subsequent to qualifying facility filing of

design information, the utility shall examine the suitability of installed utility circuit protection equipment to accommodate the individual qualifying facility.

-B: 4.352 Evaluation of Interconnections

The utility shall examine and evaluate the aggregate effects of the proposed interconnection of the qualifying facility along with the effects of all of the installed qualifying facilities on installed utility circuit protection equipment.

-6: 4.353 <u>Interactions of Facilities and Circuit</u> Protection

Each utility shall make specific evaluations of the interactions between qualifying facility operations and installed regulation and circuit protection equipment as part of normal planning for accommodation of the qualifying facilities. The cost for these reviews shall be an interconnection cost payable by the proposed qualifying facility seeking interconnection.

-B: 4.354 Replacement or Recoordination of Utility Equipment

Should the design of any proposed qualifying facility likely cause replacement of, or significant recoordination of the circuit protection equipment of the utility, or be expected to cause extraordinary operation of utility installed protection equipment, the qualifying facility shall be precluded from interconnection until the design of the qualifying facility has been modified to eliminate such problems, or until specific modified designs for the interconnection are established which provide for replacement or significant recoordination of utility circuit protection equipment. REPLACEMENT AND RECOORDINATION COSTS SHALL BE DEEMED A COST OF INTERCONNECTION.

-E. 4.355 Payment of Recoordination Costs

The additional equipment or recoordination costs required by -B- 4.354 above shall be paid for by the qualifying facility as a cost of interconnection.

-F: 4.356 Facility Detail

Each qualifying facility shall submit a description of the qualifying facility of sufficient electrical and mechanical detail to determine the safety and adequacy of utility installed service drops and supply equipment to accommodate the interconnection. Such data shall be filed by the qualifying facility at the time of filing of the initial data with the utility by the qualifying facility.

-8: 4.400 Potential effects of normal operations of utility system equipment on qualifying facility equipment

-A: 4.401 Utility Liability

The utility shall not be liable for the effects of normal NECESSARY utility system equipment, such as reclosures and sectionalizers, on the equipment and systems of interconnected qualifying facilities.

-B: 4.402 Facility Protection Equipment

Each utility shall advise each potential qualifying facility, immediately TWENTY-FIVE (25) DAYS after submission of proposed qualifying facility design information, of the necessity to install appropriate protection equipment to accommodate typical known operations of the utility system protection equipment.

-6: 4.403 Written Advisement

The advisement required by -B-4.402 above shall be in writing and shall specify: the particular types of protection equipment necessary, the typical known operations of the utility which require protection equipment, and the usual effects upon qualifying facilities of the failure to install such protection equipment.

-9: 4.450 <u>Utility responsibility to provide quality</u> service

-A: 4.451 Quality of Service after Interconnection

Each utility shall provide the same quality of service after interconnection as to voltage and

all other appropriate elements, as it provided to each qualifying facility prior to interconnection.

-B: 4.452 Measurement of Service

Each utility AT THE REQUEST OF A QUALIFYING FACILITY, shall measure the quality of service available on the premises of the proposed qualifying facility prior and-subsequent to the interconnection. Such measurements shall be utilized to establish the effects of the interconnection on the quality of service provided to the qualifying facility.

-6: 4.453 Establishment of Quality of Service

The measurements described above shall establish the quality of service which the utility shall maintain and provide to the qualifying facility subsequent to interconnection.

-B: 4.454 Cost of Tests

The cost of performing the above tests shall be included as part of the interconnection costs for the qualifying facility. If the qualifying facility desires a quality of service above that as provided before interconnection, the cost of such shall be an interconnection cost of the qualifying facility.

10. 4.500 Grounding of Qualifying Facility Equipment

-A: 4.501 No Interconnection Until Compliance

No qualifying facility shall commence interconnected operations until the qualifying facility obtains certificates establishing compliance with all appropriate codes and the utility approves the grounding thereof.

-B: 4.502 Grounding Practices

All qualifying facilities shall ground all equipment in accordance with utility and code requirements. Each utility shall establish required grounding practices commensurate with those found by the utility to be necessary in a

given area considering soil conditions, the nature of other loads in the area, and experience. Such grounding practices shall follow all appropriate national, state and local codes as augmented by the state of the distribution system which has evolved in the utility service area.

-6: 4.503 <u>Degraded Safety</u>

If the grounding of any installed qualifying facility can be shown to be a source of degraded safety, improvements or modifications of the interface between the qualifying facility and the utility to correct such problem shall be the responsibility and cost of the qualifying facility.

-B: 4.504 Advisement of Grounding Requirements

The utility shall advise the qualifying facility of its grounding requirements and the appropriate code requirements within ten days of the submission of design data by the proposed qualifying facility to the utility.

-E: 4.505 Inspection

The utility shall inspect the proposed qualifying facility immediately prior to any startup of interconnected service to determine compliance with all required grounding procedures.

-F: 4.506 Modifications

In the event that improper grounding of any qualifying facility contributes to electromagnetic interference with telephone lines, radio and television reception, or the operation of any other electrical devices, it shall be the responsibility of the qualifying facility to incorporate the necessary modifications to such installation to correct such difficulty. Such modifications shall be at the cost of the qualifying facility.

11: 4.550 Standards for Harmonics and Frequency

-1-

4.5511

-A: 4.551 <u>Utility to Establish Standards</u>

Each utility shall establish standards of harmonic content of the power and energy output of qualifying facilities, such standards shall be no more stringent than those imposed by the utilities on their bulk power suppliers. No qualify facility shall commence interconnected operations until it establishes, to the satisfaction of the utility, that it will produce power at a fundamental frequency of 60 HZ, and that such power will not exceed the above standards of harmonic content.

-B: 4.552 On-Site Interference

The utility shall not be responsible for on-site interference caused by qualifying facility harmonics, such as heating or failure of motors, television, telephone or radio interference and other manifestations of degraded quality of service, caused by the failure of the qualifying facility to produce power and energy at 60 HZ.

12. 4.600 Interconnected Voltage Levels

-A: 4.601 Interconnection at Secondary Levels

Any qualifying facility shall interconnect with the utility only at presently established secondary voltage levels, unless the complete cost of any modified interconnection is paid for by the qualifying facility as a cost of interconnection.

-B: 4.602 Facility Modifications

Any qualifying facility modification for interconnection which causes the installation of differing or additional protective devices, or other significant modifications on the utility system to accommodate the qualifying facility generation, shall be paid for by the qualifying facility as a cost of interconnection.

13: 4.650 Type of Generators and Inverting Equipment

-A: 4.651 Utility Standards

The utility shall establish standards which shall encourage appropriate qualifying facilities to use induction generators and line-commutated invertors rather than synchronous generators and self-commutated equipment, to minimize the possibility of reverse power flow during line outages.

-B: 4.652 <u>Power Factor Standards</u>

Each utility shall adopt standards for power factor available at the point of interconnection to the utility system. Such standards shall require that the qualifying facility shall not produce excessive reactive power during off peak conditions nor consume excessive reactive power during on peak conditions. Deleterious effects on the utility system caused by abnormal power factor shall be corrected by the utility at the qualifying facility's expense. Such expense shall be a cost of interconnection.

14: 4.700 System Protection Equipment

-A: 4.701 <u>Disconnection Equipment - Qualifying</u> Facility

Prior to interconnection, each qualifying facility shall install equipment which will reliably and automatically disconnect or disable the generating equipment of the qualifying facility from the utility lines in the event of a line outage. This equipment will also provide reliable and automatic disconnection of the qualifying facility from the utility service in event of the failure of the generating equipment of the qualifying facility. At the time of utility inspection of the qualifying facility prior to interconnection, the qualifying facility shall demonstrate proper operation of this equipment to the satisfaction of the utility.

-B- 4.702

Isolating Devices

-1- 4.7021

The device(s) described in -A- 4.701 or a separate device, shall also have the capability of isolating the energy generated and delivered by the utility or qualifying facility. Such device(s) shall be accessible to the utility and qualifying facility. The utility and qualifying facility shall have the right to operate such device(s) whenever necessary in the judgment of the utility or qualifying facility to maintain safe operating conditions, and whenever the operations of the qualifying facility or utility adversely affects the utility or qualifying facility system.

-2- 4.7022

The device which isolates the qualifying facilities generation shall be lockable only by the utility in the open position. The device which isolates the utility's generation shall be lockable only by the qualifying facility in the open position. Such device(s) shall be so installed that visual verification of the locking of the device(s) in the open position shall be easily and readily accomplished by the utility and qualifying facility. The utility or qualifying facility shall notify the other party of proposed, or impending disconnection prior to such disconnection in accordance with the requirements of Rule ###-10-6- 3.953.

-6: 4.703 Fused Protection

Qualifying facilities shall install fused protection of all switched interconnections between major components of the equipment of the qualifying facility.

-B: 4.704 Relaying Equipment

Each qualifying facility shall install such protective relaying equipment as is required to confine the effects of faults, lightning strikes

or other abnormalities within the equipment of the qualifying facility, and to protect the equipment of both the qualifying facility and the utility.

-E: 4.705 Extraordinary Operation of Equipment

Each utility shall establish standards of qualifying facility equipment which shall limit qualifying facility equipment in such a manner that it will not cause any extraordinary operation of any of the system protection equipment of the utility. Within ten TWENTY-FIVE days of the submission of the design information by the qualifying facility to the utility, the utility shall specify such standards in writing to the qualifying facility.

-F: 4.706 Phasing

Each utility shall inform each proposed qualifying facility within ten days of qualifying facility filing of design data, of the presently existing phasing immediately available to the qualifying facility. The utility shall encourage the qualifying facility to use the present phasing for proposed interconnection. The utility shall inform the qualifying facility that any phase imbalances may effect the safety of the proposed service, or effect neighboring customers' loads. In the event that phase loadings of the interconnection causes phase imbalances, the cost of equipment to correct such shall be a qualifying facility interconnection cost.

15: 4.750 Notice of Compliance

At the time that the qualifying facility determines that it has complied with all utility and Rule requirements for interconnection, the qualifying facility shall give notice thereof to the utility. Within ten days of the receipt of such notice the utility and qualifying facility shall arrange a

time for on-site inspection of the qualifying facility by the utility. At the time of inspection, the utility shall inspect the entire installation, including all systems and equipment of the qualifying facility for purposes of determining compliance by the qualifying facility with all utility and rule requirements.

- -A: 4.7501 If the utility determines from the inspection that the qualifying facility complies with all utility and Rule requirements, the utility shall certify in writing that the qualifying facility complies.
- -B: 4.7502 In the event that the utility determines that the qualifying facility fails to comply with any Rule or utility requirements, the utility shall specify in writing the precise requirements remaining which the qualifying facility must meet for interconnection. Upon compliance with the specifications, the qualifying facility may again give notice of compliance to the utility and the parties shall then proceed as provided by this rule.
- -6: 4.7503 When the qualifying facility obtains compliance certification from the utility the qualifying facility and utility shall schedule a date for the initial energizing and start-up test of the qualifying facility's generating equipment. The utility shall be present at such test.
- -B. 4.7504 At the conclusion of the test the utility shall either certify that the qualifying facility is certified to commence interconnected operations or that the qualifying facility does not meet all Rule and/or utility standards.
- -E: 4.7505 If the qualifying facility fails the initial test, the utility shall specify in writing the particular standards which the qualifying facility must meet before rescheduled start-up

tests are performed. The qualifying facility shall comply with all specified requirements for rescheduled start-up tests. Upon compliance therewith the parties shall reschedule start-up tests, and the procedure as set forth herein for initial test shall be followed.

-F: 4.7506

If the qualifying facility makes any significant modifications or if future difficulties arise on the system of the qualifying facility, or utility, as the consequence of the interconnection, which requires different or additional protective devices, or other utility system modification, the utility may require such as a condition of continued interconnected operations. The cost of such additional protection equipment or modifications shall be to the qualifying facility.

16: 4.800 Meters

-A: 4.801 Supply and Maintenance of Meters

The electric utility shall supply and maintain meters at cost, to measure the total generation of each qualifying facility independently from load, for purposes of billing.

-B: 4.802 <u>Location of Meters</u>

The qualifying facility shall supply at no expense to the utility a suitable location for the installation of meters.

-6: 4.803 Cost of Meters and Maintenance

The cost of meters shall be payable by the qualifying facility as a cost of interconnection. The cost of maintenance of meters shall be paid by the qualifying facility as incurred.

17: 4.850 Maintenance of Qualifying Facility

-A: 4.851 Facility to File Maintenance Schedule

Immediately prior to interconnection the qualifying facility shall file with the utility a planned schedule of maintenance, specifying the means and procedures planned. No qualifying facility shall commence interconnected operations until the utility approves the proposed maintenance schedule of the qualifying facility.

-1-4.8511 The utility has the right to inspect the qualifying facility from time to time on demand, to insure compliance by the qualifying facility with the approved maintenance schedule, and to insure proper operation of all protective equipment, including relays, circuit breakers at the interconnection, and tripping breakers on the protective relays. The utility may also inspect the qualifying facility on demand, to determine if a qualifying facility may be, or has been reselling utility energy and/or capacity to the utility.

-2: 4.8512 If from inspection the utility finds that the qualifying facility has not complied with its schedule of maintenance, has been reselling utility energy or capacity to the utility, or that protective equipment is not properly operating, the utility may give the qualifying facility a thirty day notice of disconnection.

All inspections, other than for resale of utility energy or capacity, shall be witnessed by utility and qualifying facility personnel at mutually agreeable times. Utility inspections to determine wheather the qualifying facility has been reselling utility energy or capacity to the utility may be accomplished without prior notice. At such inspection the utility shall invite the qualifying facility

to witness the inspection.
However, the inspection may be conducted without the presence of the qualifying facility if it declines to particiate. The qualifying facility shall maintain complete maintenance records, and the utility shall maintain complete inspection records. The qualifying facility and utility shall provide copies of such records to the other party.

- -4: 4.8514 Each utility shall establish appropriate inspection procedures for each qualifying facility and provide a copy of such prior to interconnection of the qualifying facility.
- 4.8515 -5: Any disconnection notice shall specify the required maintenance to be performed, operational practices to be modified or terminated, or repairs to be made to protective equipment, prior to disconnection. The qualifying facility shall perform such maintenance, modify or stop the stated operational practices, or repair the specified protective equipment, prior to the date of proposed disconnection. Upon completion of all such maintenance, proof of modified or terminated operational practices, or protective equipment repairs, the qualifying facility shall notify the utility who shall reinspect the facility. If the utility finds compliance with the specified requirements, scheduled disconnection shall be cancelled. If the utility finds noncompliance with the specified requirements the facility shall be disconnected as provided in the original disconnection notice.
- -6: 4.8516 The utility and the qualifying facility may agree to a reasonable continuance of disconnection if the qualifying facility is making bona fide efforts to perform the specified maintenance, modify or stop the specified operational practices, or repair the protective equipment.

-B: 4.852 <u>Facility to File Generation Schedule</u>

All qualifying facilities, other than those dependent on intermittent sources of energy such as solar or wind, shall file a proposed schedule of generation with the utility for use in coordinating normal maintenance of distribution facilities, or for coordination with the bulk power supplier of the utility. Such information may also be used by the utility and qualifying facility for the safety of maintenance personnel in coordinating regular operations. The proposed schedule of generation shall be filed by the qualifying facility with the utility prior to the commencement of interconnected operations.

18: 4.900 Indemnity

-1: 4.901 Utility Indemnity

The utility shall indemnify the qualifying facility its officers, agents and employees against all loss, damage, expense and liability to third persons for injury to or death of persons or injury to property, proximately caused by the construction, ownership, operation, maintenance, or failure of, the utility's works or facilities used in connection with interconnected operations. The utility on the request of the qualifying facility, shall defend any suit asserting a claim covered by this indemnity. The utility shall pay all costs that may be incurred by the qualifying facility in enforcing this indemnity.

-2. 4.902 Qualifying Facility Indemnity

The qualifying facility shall indemnify the utility, its officers, agents and employee's against all loss, damage, expense and liability to third persons for injury or death of persons or injury to property, proximately caused by the construction, ownership, maintenance, or failure of the qualifying facility's works or facilities used in connection with interconnected operations.

The qualifying facility, on the request of the utility shall defend any suit asserting a claim covered by this indemnity. The qualifying facility shall pay all costs that the utility may incur in enforcing this indemnity.

19. 4.950 Hold Harmless

The utility and qualifying facility shall hold each other harmless from liability for damages caused to the facilities of the other party by reason of improper or faulty operation, or non-operation of the facilities of the utility or qualifying facility.

-V:- 5.000 Exemption of Qualifying Facilities From Certain Colorado Laws and Regulations, and Waivers.

-1- 5.100 Exemption

All qualifying cogeneration and small power production facilities are exempted from Colorado state laws and regulations respecting:

-A: 5.101 <u>Rates</u>

The rates of electric utilities; and

-B: 5.102 Other

The financial and organizational regulation of electric utilities.

-2. 5.200 Exceptions

No qualifying cogeneration or small power production facility shall be exempt from any Colorado state law, rule or regulation implementing these rules, nor from the provisions of these rules.

-3. 5.300 Contract Review by Commission

The exemptions provided for by this rule shall not divest this Commission of its authority to review contracts for purchases and sales of power and energy, as long as such review is consistent with Sections 201 and 210 of PURPA.

-4: 5.400 <u>Utility Waivers from Rule III</u>

Any electric utility, after mail notice to all existing and known potential qualifying facilities and after public notice in the area served by the utility, may apply for a waiver from the application of any of the requirements of Rule III 3.000, other than sub-paragraph 3 3.300 thereof. The burden of establishing such waiver shall be on the utility.

(Decision No. C82-73-E)

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF COLORADO

IN THE MATTER OF THE RULES OF THE PUBLIC UTILITIES COMMISSION OF THE) STATE OF COLORADO REGULATING RATES) AND SERVICE OF COGENERATORS AND SMALL POWER PRODUCERS.

CASE NO. 5970

ERRATA NOTICE

January 27, 1982

Decision No. C82-73 (Issued January 12, 1982)

Page 1 - Appearances:

William H. McEwan, Esq., Denver, Colorado, for Colorado Association of Municipal Utilities, Partially Regulated Municipal Systems;

Page 20 - second paragraph, line 4 change word "the" to "certain minor" and delete the words "noted in attachment 2".

Page 1 - Table of Contents - In upper right hand corner show Attachement 1, Decision No. C82-73.

Rules Page 13 change "3.6012" to "3.5012" (next to the last line)

Rules Page 26, Rule 4.203, fifth line should read

within ten TWENTY-FIVE days of the final receipt

THE PUBLIC UTILITIES COMMISSION OF THE STATE OF COLORADO

Executive Secretary

Dated at Denver, Colorado this 27th day of January, 1982.